

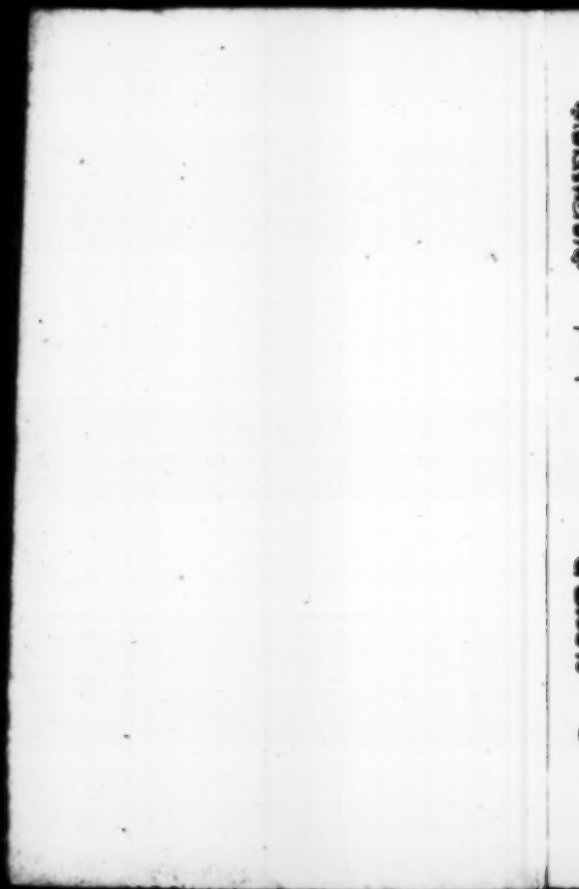
A Brief
DISCOURSE

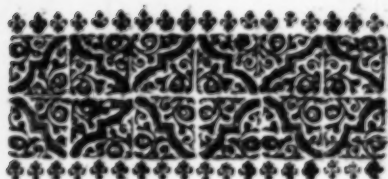
Concerning the
Three chief Principles
O F
Magnificent Building.

Viz. { Solidity,
Conveniency,
and
Ornament.

By *Sr. Balthazar Gerbier*, Knight.

L O N D O N,
Printed by *Tho. Mabb*, for *Tho. Heath* at the
Globe within *Ludgate*, 1664.





TO THE
K I N G S
MOST

Excellent Majesty.

May it please your Sacred Majesty:

MY place of Ma-
ster of the
Ceremonies

(which the King

A 2 your

The Epistle

your Royal Father
of blessed memory,
confirmed unto me
during my life, by
the Great Seale of
England,) is to intro-
duce Forreign Prin-
ces or their publick
Representatives to
your Sacred Pre-
sence. And in re-
gard the Place of
Surveyor Generall
was

Dedicatory.

was also intended to
me (after late *Inigo*
Jones) I doe make
bold to introduce
the three Capitall
Principles of good
Building to your Sa-
cred Majesty, who
hath seen more state-
ly Palaces and Build-
ings, than all your
Ancestors, and may
be a Pattern to all

A 3 fu-

The Epistle

future Posterity, by
Building of your
own Palace worthy
your Self, and place-
ing it as the *Italians*
for their health, de-
light, and convien-
cy (as well as Solidi-
ty and Ornament,)
La Matina alli Monti,
la Sera alli Fonti, ac-
cording to which
the main body of
your

Dedicatory.

your Royal Palace
may be set on the
side of Saint *James's*
Park, and the Gar-
dens along the Ri-
ver.

If the Book af-
foards any thing
worthy your Sacred
Majesties further sa-
tisfaction, I have
obtained my end,
and done the Du-

The Epistle, &c.
ty intended by

Your Sacred Majesties

Most humble, most obedient, most

Loyal Subject and most zealous

Servant Balthazar Gerbier

D'ouilly Knight.

TO



TO THE
L O R D S
A N D
COMMONS
Assembled in
P A R L I A M E N T.

May it please your Honours :



I being lately re-
ported that your
Honours have
deliberated to have the
Streets

The Epistle

Streets made clean, to enlarge some of them, and to Build a Sumptuous Gate at Temple-Barr; I thought it my Duty to Present this small Discourse of the three Principals of good Building, and withall a Printed Paper concerning the Cleaning of the Streets, the Levelling the Valley at Fleet-Bridge, with Fleet-Street and Cheapside.

Dedicatory.

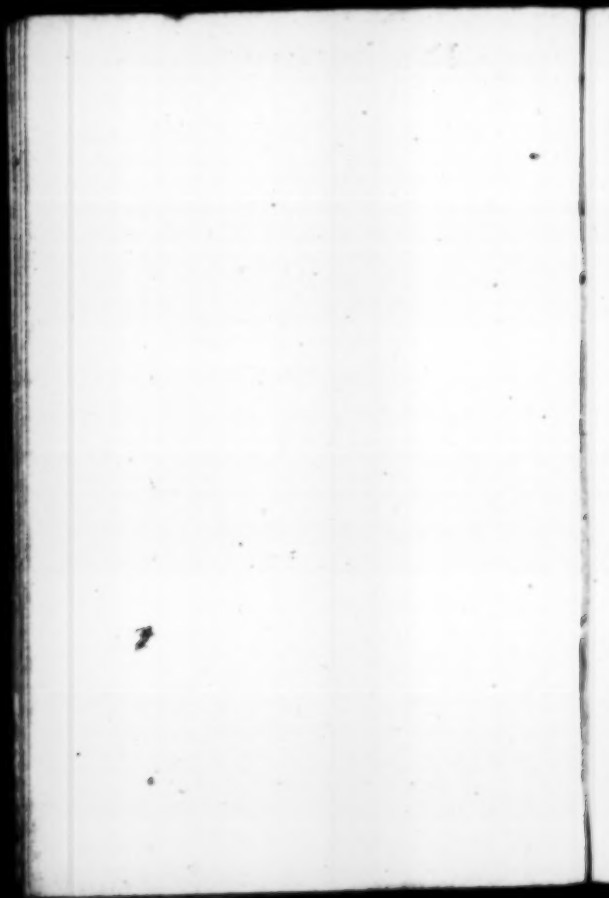
Cheapside, and the making of a Sumptuous Gate at Temple-Barr, whereof a Draught hath been presented to his Sacred Majesty, and is ready also to be produced to your Honours upon Command, with all the Devotion of

Your Honours

most humble and most

obedient Servant

B. Gerbier Douvilly Knight,





A Brief Discourse,
concerning the
three chief Prin-
ciples of Magni-
ficent Building,
viz. Solidity, Conve-
niency, and Orna-
ment.



Hereas Building is much
minded in these times,
I thought fit to publish
some Principles there-
on, which may stand the lovers of
it

it instead. Yet without spending time and Paper to Note how a Point, Line, Angle, Demi-circle, Cube, Plint, Baze, Pedestal, Colombe, Head, Architrave, Frize, Cornice, or Frontispiece must be made; and what Dimensions all those several parts (a Point excepted) must have, since all Master-Workmen ought to remember) as Schollars their Grammar, and Arithmatitions. their Table) how every Particle must have its just proportion; and that the height of Windowes and Doores must be double their breadth; and also to be carefull to maintain the due esteem of their Art, since its Dimensions and Rules came directly from Heaven, when the great Architect and Surveyor of Heaven and Earth, prescribed the Rules and particular Orders for the Building

Building of a floating-Pallace;
(*Noahs Ark*) and the glorious
matchlesse Temple of *Solomon*,
the perfect House of Prayer.

And therefore such Precedents
may serve to convince those who
say, That a wise-man never ought
to put his finger into Morter,
since there is a necessity for
Building, especially among Na-
tions who do not, or cannot live
in Caves and hollow Trees, or
as the Wilde *Indians*, who have
no other Roofs but of Palmito-
Leaves, nor Wainscot, but Bam-
bouses, as they call the Poles to
which they tye a Woollen Ham-
mac to lye in.

There are three Capitall Points
to be observed by men, who in-
tend to Build well :

VIZ, { Solidity.
Conveniency.
Ornament.

Those

Those who have Marshall'd the Orders of Colombs (to make good the first Point) have Ranged the Toscan to be the Supporter of a Building, but such an Atlas must stand on a firm Ground, not as ill Builders place Colombs (either of Brick or Stone) like things Patcht or glewed against a Wall, and for the most part against the second Story of a Building, (contrary to the very *Gothish* Custome, who at least did begin their Buttrises from the Ground) as if their intent were, that the weight of the Colombs should draw down the Wall, on the heads of those that passe by.

Such Builders confound the first and essential point of Building, (to wit, *Solidity*, with *Ornament* and *Conveniency*.)

They will make a shew of something, but misse thereby (as ill Bow-

Bow-men) the Mark: They may perchance have heard of rare Buildings; nay, seen the Books of the *Italian* Architects, have the Traditions of *Vignola* in their Pockets, and have heard Lectures on the Art of Architecture, which have laid before them the most necessary Rules, as also the Origine of the severall Orders of Colombs, and Discourses made thereon; that the *Toscan* is as the *Hercules*, so of the *Ionic* and *Corinthian*; the first of the two to Resemble the Dressing of the Daughters of *Ionio*, who had Twists of Hair on both sides of their Cheeks. The *Corinthian* Heads to represent a Basket with *Acante* Leaves, and the Guttered Colombs, the Pleats of Daughter and Womens Cloaths.

That the *Grecians* (in remembrance of their Victories) did

C. P.B. 36. Range

Range the Colombs in their Buildings, to represent the number of Slaves which they had taken; the Grains, Beads, Drops, Pendants, Garlands, Enterlaced-Knots, Fruitage, and an infinite number of Ornaments, which are put on the Frize, to signifie the Spoiles which the Victors had brought away from their Enemies; and to preserve the Memory thereof, did place them on their Buildings, that they might also serve for a true History.

But none of such Ornaments were ever impediments to the strength, or convenience of a Building, for they were so handsomely and well contrived, as once the Dutchesse of *Gheveruse* (a French Lady) said of the English Females, that they had a singular grace to set their Ornaments right and handsomly.

The

The *Babarians* and naked *Ta-poyers*, *Caripowis*, *Alibis*, (and several *Charibdiens*) do place Pendants in their Nostrils, which are proper for the Eares; and these hinder not the use of the Lips, which ought to be observed by all Builders.

And as for the inside of Fabricks, Builders should in the first place set the Doors, Chimnies, and Windows, as may be most convenient for use.

Builders ought to be not onely experimented in House-keeping, but also good Naturalists, to know (before they spend time and Materials) the required Property to every part of a Building. A Doore to be so set as it may not convey the Wind toward the Chimny or Bedstead, though opened never so little.

The Windows to be so placed,

as that the Fire made in the Chimney, may not attract the Aire and Moysture, and so prove the unwholesomest part of the Room for those that are near the Fire; Which was the main reason why the great *Isabella Infanta* of Spain (King *Philip* the Seconds Daughter, who Governed the Provinces of *Brabant*, *Flanders*, *Artois*, and *Haynault*, during her many years Residence at *Bruxells*, (being prepossessed with a prejudice, never approached a Fire to warm her self; till at last being through wet (going a Procession in a great Rain, and by a Visit made by *Mary* of *Medicis*, Queen Mother, to *Lewis* 13th, just as she returned to her Pallace) had no time to Shift her, she was constrained to approach the Fire to dry her self, and few dayes after she fell sick and died upon it: which

Relation

Relation being very true, and happening in the time that I resided for the King of blessed memory in that Court, I thought fit to mention, to perswade all Noble and curious Builders, to place their Doors, Windows, and Chimnies in their proper places.

An though it be not my design in this small Discourse to Treat of Dimensions (which are fit for a Primar to Apprentices,) Yet I cannot desist (by reason of the *West-Indian* Herican-like-windes which happened *February* last, to perswade all Builders to forbear the Building any more those exorbitant Chimney-Shafts, which when they fall, break both Roofs and Sealings of Roomes, and kill good People in their Beds : since a Chimney some two Foote higher than the Ridges of the Roof of a Building, (which is not o-

vertopt by a Church or Steeple, or some other eminency,) is as good a conveyance for the smoak, as any of a greater hight. Neither are those high Shafts of Chimnies real Ornaments to a Building, much lesse to the Palace of a Sovereign: nor do the *GERMANE* Travellers of this Age any more fill (as formerly) their Table Books with the number of them, as they were very carefull to note the Names of their Hoatts, where the best Wine was, and when they tasted that called *Lagrime-Christi*, they moaned and askt why he did not weep in their Countrey. Its true, that the least addicted to Bibbing, did put in their Stam-Books the Dimentions of the *Panttheon* and of the *Amphitheatres*; as also of *Capraola*, *Frascati*, and such Magnificent Structures above Ground in *Italy*, and under Ground

Ground *La Piscina Admirabile, La Grotta de la Sibila Cumana, Bag-
ni de Cicerone, tante Camere, e
le Sepulture delli nobili Antichi.*
But they are now taught by Tu-
tors to observe the Inside of Men,
and Buildings. And as the best
Ornaments of a Face appears at
first sight by the Eyes, Mouth,
and Nose; so doth the best qua-
lities of a perfect Building, by
Windowes, and Doors well pla-
ced, as also by a large, magnifi-
cent, commodious, and well-set
Staircase.

Noble, magnificent, and com-
modious Staircases, must in the
first place participate of a Noble-
mans manner of Pace and Atten-
dance.

There is no man of sound Limbs
(and that hath a gallant Gate) but
lifts his Toes at least four Inches,
when he goeth an ordinary easie

Place; so that if two steps (each four Inches high) be eighteen Inches broad, or deep, which makes six and thirty Inches the two (the just measure of a mans two steps,) they may be ascended from the first Floor, to the higher Story, as if a man walked on a level ground.

2. Those Staires ought to be so long, that the Attendants on each side the Noble Person, Prince or Sovereign, may not be streightned for roome.

Such were the Monarchlike Staires of the Pallace of *Darius* and *Cyrus* the Great, at *Chelminor* in *Persia* near *Saras*, the Metropolitan between *Ormus* and *Espahan*. I do speak indeed of a Pallace without comparison to any other, the Walls of Circumvallation of that Pallace, being four and twenty foot thick, and the Staires (as yet

yet in esse) are fourty foot long, in number an hundred and eight, of Circular Form, and of so easie an Accessle, as that Travelers do ascend them on Horseback.

King *James* of blessed memory could not have been so much in danger of an Onset in a Paire of Staires, larger enough for a Noble Retinue to his Person, as he was in a narrow Pair, which History mentions.

Neither had *Willam* Prince of *Orange* been so easily Shot at *Delff* in *Holland*, descending a narrow Pair of Staires.

4. A Noble Paire of Staires should have a Cupelo, and no Windowes on the sides, which for the most part serve but for Rude and Unadvised Men to break.

In some Pallaces and Noble-
Mens

Mens Houses, *Too many Staires and back-Doors* (as the old *English* Proverb) *makes Thieves and Whores*. And the setting the Front of a Building towards the North-West, and a Pallace, like Cardinal *Wolseyes* ill-placed one (now called *Whitehall*) on a low ground by the River side) makes work for Physitians, Apothecaries, Surgeons, Coffen and Grave-makers.

But as for a Seate on Morish Grounds (except the Builders observe the practice of those of *Venice* (in *Italy*) and *Amsterdam* (in *Holland*) who bestow more Timber of Oake in the Foundation of one, than in the Building of six Houses,) in effect 'tis to Build perpetually, leaving to their Posterity to prop and redresse their ill grounded Buildings, and they may well be rankt with the Duke
of

of *Arscot*, who built much in *Brabant*, and (in a merry humour) designed in his Will ten Thousand *Gilders per annum*, to support and alter what he had Built amisse.

I must also advise Builders on high Grounds, to cause their Surveyors to search for Springs, and shun them; which serve better to fill up Glasses to allay the Vapours of *Gascony* Wines, than to make a Pond in a Sellar.

Builders ought also to be very curious and carefull in the choice of the place to build a Seat on, for good Prospect, well Garnisht with Woods, and the Water at hand, not too near, nor too far from a City or Town.

Item, I must wish all Princes and Noble Persons who are resolved to Build Palaces and Seats answerable to their quality, to imitate those

those who in the Heathen age were so carefull in the ordering of the Structure of their Stone Images, especially of their *Saturn, Jupiter, Apollo, Mars, Neptune*, (and all their Fry of wanton Goddesses) as to empannel a Jury of Philosophers, Naturalists, Physiognomists and Anatomists, who were to direct the Sculptors how to Represent those Images. And so I would wish Builders to proceed in the contriveing the Models of their intended Fabrick, to wit, to consult (as those of *Amsterdam* did in the making the Model of their Town-House, divers experimented Architects, though they pitcht for the Front on the worst of all.

- *Item.*, Before the Workmen, make use of Materials, and not to Build at Randome, as the Custom of too many ill Builders is; And when once the Model is approved

proved, never to alter, nor to pull down what hath been well begun, nor to hearken to the diversity of opinions, which have been, and are the causes of many Deformities and Extravagancies in Buildings; and especially those who seem to have had for Models Bird-Cages, to jump from one Roome into the other by Steps and Tressels, to cause Men and Women to stumble.

And the sides all of Glasse (like Spectacles) the glasse Windowes of small Payns, with great store of Lead, to draw the more Wind and Moisture from the open Aire within Doores. As also Windowes with store of Iron Casements, which rust, and never shut close, Notwithstanding all the various devices of Smiths, to catch Money out of the Builders Purses, contrary to the good

good custome in *Italy, Spain, France, Germany,* and the Low-Countreys, which certainly for plurality of Voices should be believed, and followed.

Those Nations cause their glasse Windows to be fitted in wooden Casements treble riveted, to keep out Wind and Rain; they are lined with wooden Shutters, and have double boarded Shutters without, to resist all the violence of the Weather and Thieves.

Let no man mistake these Windows for wooden Casements, for such are usually seen here in *England* in old wooden Houses, the Casements scarce above one Foot and a half high, tottering things; for these are substantially, strongly, and curiously made Casements, nor are the wooden Shutters such Past-board.

board-like things, as are generally put on the outside of the Windows on the *London* and Suburbs Houses, but double-Deal well-riveted Windows, with substantial Locks, Bolts, and Hinges, and a double Iron Bar, with a Bolt fixt in the middle of them both.

Nor do good builders affect partitions of Lime and Hair in their Houses, nor any of their Bricks to be daubed over with finishing-Morter.

The *Romanes* are very curious in the tempering their Morter, and in the laying it as thin as possibly they can, to prevent the sinking and bending of their Walls, which the laying of their Morter too thick doth cause; and experience sheweth, that when some Walls are taken down in *England*, half of the substance

substance is Sand and Dust.

The *Romanes* (as likewise the *Grecians* before them) did not make use of their Lime, at the same time it was slakt, but for six Moneths time suffered to putrifie, and so putrified composed a Seiment, which joyned with Stone (or Brick) made an inseparable union, and such strong work as I have seen Iron-Tools break on the old Morter of the *Amphis theaters* at *Verona* and *Rome*.

Their manner of preparing Lime is to lay it in Cesternes the one higher than the other, that the Water (after it hath been so stirred as that it is well mixt and thoroughly liquid) may drayn from one Cistern to the other, and after six Moneths time (the Lime having evacuated its putrefaction) remains

mains purified, and then they mix two parts of Lime with one part of Sand, and makes that strong and pure Morter, which if practised in *England* would make a wondrous strong Union, especially if the Clay-makers did beat the Clay as it ought to be, the English Clay being better than the Italian, nay the best in the world.

They are very carefull in the making large and deep Foundations, and to let the Walls raised on the Foundations rest and settle a good while before they proceed to the second Story.

Some of our Carpenters have learned to lay Boards loose for a time; the *Italians* and other Nations are not sparing therein, they nail them as if for good and all, but rip or take them up again, to fit them for the second time.

As I said before, no Building is begun before a mature Resolve on a compleat finish'd Modell of the entire design: the Builder having made choice of his Surveyor, and committed to him all the care and guidance of the work, never changeth on the various opinions of other men, for they are unlimited, because every mans conceits are answerable to their profession, and particular occasion.

A Sovereign or any other Landlord, is then guided by naturall Principles, as well as by his own Resolve, taken on a long considered Modell, because they know (by experience) how suddain changes are able to caule monstrous effects.

They know that a well-experienced Surveyor must not be disturbed in his task, and undertaking,

dertaking, but as the Silk Worm
and the Soul of Man, the first
in his Husk, the second in the
Womb, wherein both the one
and the other (by the powers
of the great Architect and Di-
rector of all things) works out
his own compleat Fabrick, and
not interrupted, but if inter-
rupted by any outward acci-
dent, it happens, that these pas-
sions become the originall causes
of important Features and Forms.
And now for all Builders, to suffer
a good Architect quietly to per-
sue his task, if he understands

As for Tree-stone
It hath been observed
among the French a Nation as
much addicted to changes as
any, that when the charge of
an undertaking hath been com-
mitted to many, it caused but
confusion, and therefore its

saying among them, *Trop de Cui-
sineurs gâtent le potage*. Too
many Cooks spoils the Broth.
I shall not spend time, and
transgresse on the Readers pati-
ence, concerning the making of
Clay, and burning of Bricks,
only say, that it imports much
the Clay should be well wrought,
before it be put in the Mould:
experience hath also taught Brick-
makers to have them of such a
length, thickness and wideness,
that four of them together
with the Mortar thereunto belong-
ing may make a Foot.

As for Free-stone, *Portland*
Stone works well, and makes a
good union with Bricks, yet can-
not be compared with Marble, nor
to the Blewish Stone of the Quar-
ries of *Lyge* and *Norwich*, but 'tis
also certain, that this Climate makes
Marble it self to Moulder very
much;

much: as for example, the *Coin* and *Abel* in *York-House* Garden, which did not Moulder when it stood in that of the Duke of *Larima* at *Alcalá* in *Spain*, the coldness (together with the moistness of this Climate) being of a contrary operation to the temper of the Aire in *Italy* and *Spain*. And therefore when Builders see their Copings, Water-table, Cornishes, Railes, and Balisters to decay, they must have patience, since there is no Material but is subject thereunto, and that Railes and Balisters (either on the top of the Walls of a Frontispiece, or in Belconies, though never so well Painted in Oyle, and of the best seasoned Timber,) but must be renewed at forty or fifty years end.

Builders ought to calculate the Charges of their designed Building, and especially with what

Summe of Money they are willing
 to part, and yet remember to imi-
 tate some Philosophical Humorist,
 who resolves to venture on a pret-
 ty thing, called a Handsome Lady,
 without which their Fate seems to
 tell them they cannot live, and
 therefore makes an account before-
 hand that all things will not pre-
 cisely answer his expectation. But
 on the contrary, the Lady instead
 of being a good Housewife, (and
 an assistant) proves expensive, and
 an impediment. And if it prove
 otherwise, she will be a great gay-
 ner by the bargain; for let Build-
 ers put a bold design to Master-
 Workmen by the Great, or have
 it wrought by the Day; either
 the Workmen will over-reach
 themselves, or the Builder will be
 over-reached. of the Builders
 Charity to the one, and respect
 to the other, moves me to keep
 the

the rest in my Pen, yet shall never be backward to inform either of them in the ear what may be the best for them to choose.

But I must freely advise all Builders in general, never to begin to Build on a Ground before it be Purchased, as the late Duke of *Buckingham* did at *York-House*, where there hath been much daubing and breaking through old rotten decayed Walls; first to make a Ladies Closet on the corner of a Wall where a Butterysees stood, and which was taken away for the Closet, intended only at first for a Closet of ease, and to serve untill the Archbishop of *York* could be perswaded to accept as good a Seat as that was, in lieu of the same, which could not be so soon compassed, as the Duke of *Buckingham* had occasion to make use of Rooms, to entertain (accord-

ing to the Dignity of a prime Minister of State) forreign Princes and Embassadors ; so as on a sudden, all the Butterises that upheld that rotten Wall were thrown down, the Seeling of Roomes supported with Iron-bolts, Belconies clapt up in the old Wall, daubed over with finishing Morter, and all this (as a Toadestoole groweth in a night) to serve untill a Model for a Solid Building (to stand even with the Street) were made, and to be Built of such Stone as the Portico or Water-Gate at the River side is ; and this was done on a Moorish Ground, whereon no New Building could stand any time without Proppings ; which was contrary to the main Principle of good Building.

I must proceed and conclude with my humble respects concerning Palaces of Sovereigne Princes, which

which must differ as much from other Buildings, as their quality and condition from that of their Subjects.

And in the first place, as *Solidity* must be the first Principle in all good Building; so much more ought it to be observed in that of Sovereigns, unto whom the whole world hath access.

And as there must be spacious Ground before their Palaces; their Inner-Court ample; the Offices for their Retinue large and commodious, and so placed as they may neither be an annoyance nor of ill aspect.

The first Stories ought rather to be vaulted than boarded, to prevent such an accident as happened to *Lewis* 13th French King, (and his Queen at a Ball,) when the Floore of the Roome (with all the Company) fell down; the
King

King and Queen only remaining
(by a special Providence) on the
Hearth of the Chimny, setting un-
der the Cloath of State.

And as there is a necessary
Magnificence to be exprest on the
Front and inside of Princely Build-
ings, answerable to their great-
ness; so is it absolutely necessary,
that the Architect be posselt with
a Soul as great as the Player in the
French Play, called the *Virionar-
ies*, where he perswades himself
to be *Alexander*, and governs his
Motions accordingly. And the
Lines and Strokes of the Archi-
tect must be *Alexander-like*: his
Figures and Statues *Colosses*, his
Pyramids like those of *Egypt*,
and the Vaults like that Rock
wherein *Alexander* and *Darius*
wrestle for Mastery in a Valley in
Persia, between *Babylon* and *Es-
pahan*, at a place called *Carimon-
han*,

ban; where formerly was a great City six English Miles long; in which *Grote*, the *Alexander*-like mind of the Sculptor, hath Hewn within the Rock, (besides *Alexander* on Horseback, and a number of Huntsmen and Ladies) the aforesaid *Alexander* and *Darius* wrestling to break a Ring between them.

Such a like mind Prince *Thomas* of *Savoy*, (Sonne to the Great *Emmanuel* of *Savoy*) infused into his Architect, Sculptor, and Caster in Brasse, who he imployed in the Designing and Building a Stable in *Turin*, within all of Marble, the Racks, Manger, and the upright Posts all of Copper, Richly Wrought, Conveyances of Water Pipes. The Manger fourteen Inches wide at the bottom, to contain a Pale for Water on all Occasions. The uppermost edge of the
Manger

Manger three foote eight Inches high from the Ground, to accustom the *Neapolitan* great Saddle-Horse to raise their Neck. The Rack Poles three Inches asunder and upright, that as the Frenchman saith, (*L'appetit vient en mangeant*) the Horse may feed more chearfully, the Hay and Dust may not fall on their Heads, as it doth out of a Rack which stands shelving: the under part of the Manger ought to be made up to keep in their Litters, and no Boxes made there for Dogs, as some not curious do, where no Harnesses, Saddles, Coverings of Horses, or any other Implements or Toolles, are not to be seen about the Postern, since those things do but impede the Access of a Cavalier to the Horses.

The disposing a Stable into a double Range, hath been affected
by

by some, who would see all their
Horses at once.

Others love only a single Range,
with a broad Walk, and if they
have a great number of Horses,
returne at the end into another
Range, if the Ground can afford
the same, so as a Wall makes the
Partition between the Horses.

The Paving of such a Stable is
very neat, being of white or yel-
low (twice burnt) *Flanders Bricks*,
in *Dutch* called *Clinkart*, farre be-
yond Planking of Stables, for di-
vers Reasons. The Paviers (af-
ter the Bricks are laid) throw sharp
Sand over them, and twice a day
they are Watered with a Garden-
ers Watering-Pot, and Swept
with a Broom, which the Grooms
are to continue sometimes, be-
cause the Sand gets between the
Joyns, and makes the Paving
very close and firm. The Pave-
ment

ment at the Foot of the Manger, must be raised at the least six Inches higher, than at the Gutter where the Posts are placed, which ought to be five Foot and an half distant one from the other, which Ground so Payed is of double use; first, that the higher a Horse stands towards the Manger, the better sight it is, and especially when the Lights of the Stable strikes on the Horse their backs, which is the better Light.

Secondly, That a Horse sits usually standing place being so much helping, accustomes the Horse (reposing more on his hinder Feet than on the foremost) to be more light and nimble in his Gait and Pace.

Thirdly, That his Stall doth not remain under him, and especially when its standing hath eight foot in length from the Manger to the Channel

Channel, which for neatnesse ought to be above Ground, the eight Foot in length, being at full the space which the Horse doth possess when in the night time he lyeth stretcht on his Litter.

I must not omit by way of *Quæries*, to Write somewhat concerning the Kitchen of a Princely Palace, *viz.* Whether there should not be as much curiosity, if not more in the Kitchen than in the Stable; since the Meat prepared in a Kitchen, ought to be Drest with all Neatnesse, and preferred before a fine Lace about the Master Cooks Towel: Neither are the Vessels of Silver but in reference to the Neatnesse which ought to be observed in all Cookery. The French Mans Glasse is wrenched as often as he Drinks, and why should not Cooks be more Curious and Neat in their Kitchens,

Kitchens, than Grooms in their Stables. And as a Stable can have conveyances for the Horses Water, so may Kitchens for Stabbering, for Guts of Fowls and Deer, Coles, Ashes, and whatsoever else can cause Dirt and Nastiness, and be freed from the annoyance of Smoak, which ill-placed Doors may cause; nor ought the Kitchen or other Offices and Selleridge, (as in some Palaces in *France*) to be so placed as they may prove prejudiciall to the Court, and if they are underneath a Palace they ought to be vaulted.

I must not forget that the Roof of a Palace should be covered either with Lead or blew Slates.

The *Pantheon* at *Rome* was covered with Brass, which a Pope melted to cast Canons, no such as only eat, drink and sing.

No curious eye can well indure those

those Barn-like Roofs of many Noble Persons Palaces, covered with red Tiles, which break and rot away, and then the Roof being mended and patcht, seems to be a Beggars Mantell, which I would not have the Nobles and Courtiers to be. See the Roofs of *Lester, Newport, Southampton*, and such like their Palaces, whether they do not look as Barns for Hay, and not Pybald, by their patched Tiles ?

As for the main bulk of Palaces, its, true some have a greatnesse in plainnesse, as that of *Farners* in *Rome*, whereof *Michael Angelo* made the *Arcitrave, Frise* and *Cornish*.

And as for Bignesse and Solidty, that of *S. Ferónimo*, and *Escoriall* in *Spain*, for Ornament, *Munick* in *Bavaria*; the *Louuer* at *Paris* for Vastnesse, Situation and Ornament by the imposed Imagery on th

D From

Frontispiece, variety of Orders of Colombs, with the delight of the annexed Tuilleries, wherein as especially in that of the Palace of the Duke of *Orleance*, but above all in the Cardinals their *Vignai* in *Rome*, is observed the form of a true Princely Garden, consisting not only in much Air, great plots of Grass, low Borders, large Gravell-Walks, but for close Walks, Fountains, Groves, and Statuaes, to make good the Italian saying, *Per varias natura é bella*. And as for the imbossed carved Imagery on the Frontispiece of a Palace, their Dimensions must be according unto their distance from the Ground; which is the main point requisite to be observed also in Scheames, wherein divers undertakers commit very great faults, not only by the not reducing whatsoever is represented to the true Lines of Perspective,

spective, but also by omitting the giving such Proportions to things, as may satisfie the sight of all the Spectators at their severall distances; for Excellency doth not consist in vastnesse, nor in the quantity of Objects, nor Shapes, nor Colours.

The Sphear in an Angle of a great Chamber in *S^t Pedro à Vaticano* in *Rome* confirms this truth, and every judicious Eye will be satisfied therewith. Seas must not only be seen to have a naturall motion, but heard to make a noise of breaking of their Waves on the shore, and against the Rocks. Cloudes must not only drive, but be transparent, Winds, Thunder, Lightning, Rain, Snow, and Hail, must be so heard, seen, and felt, as that Spectators may think those sights to be naturall operations. The Sun, Moon, and Stars, no Past-board devices,

but so represented, as that they may dazle the Eyes of Spectators. And all the Motions of Sceans and Mutations as insensible, and no more to be discovered, than that of the Hand of a Diall.

Neither can all great Rooms of Princely Palaces serve for this use, except they be after the Moddell of such as the Italians have built, as there is a good one at *Florence* in *Italy*, with conveyances for Smoak, and capacities for Ecchoes, which *Inigo Jones* (the late Surveyor) experimentally found at *Whitehall*, and by his built Banqueting House, so as having found his own fault, he was constrained to Build a Wooden House overthwart the Court of *Whitehall*.

The greatness of a Sovereign consists not in the quantity of Stone and Timber heapt together, The Quarries possess more Stone, and the

the Woods more Timber than a Banquet Room. Let any good eye judge, whether it be not true, that the extream height of a Room takes not away the greatness of the company that is in the same, and that all Hangings of Tapistery make no shew at all, unless they reach to a proportionable height of a Room.

Since the greatness of a Nation consists not in a Husk, but in it self, and in its Sovereign, nothing should be suffered to diminish the appearance of that greatness, within or without Doors. A Sovereign and his Retinue, in a too vast Roome in height, width and length, doth appear like a company in a Valley near high Mountains: Whenas a body standing on the brow of a Hill, and seen from below, seems to be a kind of *Colosse*, which argueth that there must be a great discretion used in the making them fit and pleasing.

All

All which I do not Write to undervalue any Modern Works, nor any of the Cavallier-like *Operas*, every good Talent being commendable. As I am confident there are some that live, who will not deny that they have heard the King of blessed Memory, graciously pleased to avouch he had seen in *Anno* 1648, (close to the Gate of *York-House*, in a Roome not above 35. Foot square,) as much as could be represented (as to Sceans) in the great Banquetting Room of *White-ball*; and that divers judicious persons will not deny, that the excellency of the several Triumphall Arches erected in the City of *London*, consists not in their Bulk.

The *Grecians* and *Romans* (who have shown their Master-ship in them) did conform them to the respective places.

Things can be too great, as well
as

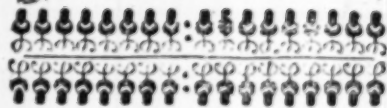
as too little, too massie, and too slender, too gaudy, and too plain; and Colours placed together, which agree not one with the other, as blew and green. God in his Rainbow having shewed us the best way of ordering Colours. Nor is it the quantity of Timber or Stone, that speaks love in an Arch, but rather when it is composed of the hearts of Loyal Subjects, which surpasseth all that can be made.

May therefore the oldest and most tottering House in the Land, breath forth of its Windows what may answer that true love, and in point of good Building; wherewith this Discourse is begun, (next to the giving such a new Form to the Streets of *London* and the Suburbs, as may in a manner equalize those in *Holland* in neatness, if the Inhabitants will but take the right and onely course therein.) May his
Sacred

Sacred Majesty during his long
 prayed for and wished Raig, see
 St. *Pauls* Church in that magnifi-
 cency, as the Metropolitane of the
 Houses of God, in the chief City
 of *Albion* justly requires. And his
 Royal Palace Built, so as to answer
 the matchlesse greatnesse of him,
 who all tongues of Loyal Subjects
 speaks to be *Carolus, Magnus, Se-*
cundum Dei gratia, Angliæ, Scotiæ,
Franciæ & Hiberniæ Regem, Eccle-
sia Legum, & Libertatis Populi Re-
stauratorem; Which shall ever be
 the dutifull Wishes of


Balthazar Gerbier

Douvily Knight.



TO THE
K I N G S
MOST
Excellent Majesty.

May it please your Sacred Majesty:

 Y place of
Master of the
Ceremonies
(which the
King your Royal
Father of blessed me-
mory, confirmed un-

A 3 to

The Epistle

to me during my life,
by the Great Seal of
England) is to intro-
duce Foreign Princes
or their publick Re-
presentatives to your
Sacred Presence. And
in regard the Place of
Surveyour General
was also intended to
me (after late *Inigo*
Jones) I do make
bold to introduce the
three Capital Princi-
ples of good Build-
ing

Dedictory.

ing to your Sacred Majesty, who hath seen more stately Palaces and Buildings, than all your Ancestors, and may be a Pattern to all future Posterity, by Building of your own Palace worthy your Self, and placing it as the *Italians* for their health, delight, and conveniencie (as well as Solidity and

A 4 Orna

The Epistle

Ornament,) *La Ma-*
tini alli Monti, la Se-
ra alli Fonti, accord-
ing to which the main
body of your Royal
Palace may be set on
the side of *St. James's*
Park, and the Gar-
dens along the Ri-
ver.

If the Book affords
any thing worthy
your Sacred Maje-
sties further satisfa-
ction, I have obtain-
ed

Dedicatory.

ed my end, and done
the Dutie intended
by,

Your Sacred Majesties

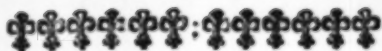
Most humble, most obedient,

most Loyal Subject, and

most zealous Servant

Balthazar Gerbier,

TO



TO
Her Most Excellent
Gracious Majestie
THE
Queen Mother.

May it please your Majesty,

DI D I not hope
that the Offer-
ing up to your
Majesties gra-
cious hands, this Printed
discourse (concerning *Buil-
ding*) might be acceptable,
it would doubtless make
me pats for insensible, how
your

your Majesty (immediately
descended from that great
Monarch, *Henry* the Phœ-
nix of all his Royal Prede-
cessors, and the Vertuous
Worthy of his Age, who in
all things made *Building*
worth a part of the employ-
ment of his heroick *Genius*.
Your Majesty imitating it,
as having inherited that
same clemencie wherein he
did excel, as in Greatness
all Sovereigns that ever
were, by graciously acce-
pting the very least mite
from any of his zealous
Subjects

Madam,

Madam, This is a kinde
of Attome, in comparison
of other Presentations; nei-
ther do I presume to think
that it should be reflected
on otherwise, lest it should
seem to intrude it self as a
Teacher to those expert
Persons, who have the ho-
nour to be imployed in the
Survey of your Majesties
Buildings; but rather joyn
these my reflections to their
labour, for the due perfor-
ming of their undertaking,
which is onely the ends of
him, who (with Heart and
Soul) shall ever pray the
Al-

Almighty ; to reserve for
your Majesty in his end-
less glory, a better Throne
than all the world can af-
ford ; these are the devoted
wishes of ,

Your Majesties

Most Humble, most obe-

dient, most Faithful and

most zealous Servant,

Balthazar Gerbier.

THE



THE
CONTENTS
OF THIS
MANUAL.

1 **A** Repetition of the summary
Contents of a former printed
Discourse, concerning the
three chief Principles of Magnifi-
cent Building, to wit; Solidity,
Conveniency, and Ornament.

2 The choice of a Surveyor, how
to try him, and what his duty is?

3 The choice of a good Clerk
of the works, and what he is to do?

4 The duty of all Master Work
men

5 The several proportions of the
five Orders.

6. Par-

6 Particulars to be minded by
all Builders.

7 Rates and Prizes of Materials,
and of the several works belonging
to building.

8 That those who Build, or
Build not, will (as those who
marry, or marry not,) have just
cause to Repent.

Counsel



Counsel and Advise

TO ALL
BUILDERS.

*For the Choice of their Surveyours;
Clarks of their Works, Brick-lay-
ers, Masons, Carpenters, and o-
ther Work-men therein concer-
ned.*



Little Manual which
I formerly set forth
(concerning the
three Chief Prin-
ciples of magnifi-
cent Building, viz. Solidity, Con-
veniency and Ornament) doth in
the first place note the incongru-
ities committed by many under-
takers of Buildings, who (both

B

within

within and without doors) do confound the aforesaid Principles : It Notes how the *Grecians* and *Romans* (the best Builders) have proceeded on undisputable Rulers, not subject to fancies, for it men should be inflaved by Weather-cock-like spirits to make their Buildings according unto things *a la mode*, especially of *Hats*, *Bands*, *Dublets*, and *Breeches*; how might workmen laugh? And would not some (who cannot jear without making use of Scripture) quote *Ecclesiasticus*; *He that is hasty to give credit is light-minded, chap. 19 v. 4. And he that teacheth a Fool, as one that glueth a pot-sheard together, chap. 21. v. 7.*

Secondly, It Notes how several great and judicious Princes and Magistrates have proceeded in their Edificies, what they have

have shunned, and what they have curiously Observed; the particular care of Surveyours, their choice of Materials, even to their preparing of their Lime and Clay: The care of their Bricklayers in laying of a Foundation, and that they have been firme and resolute in their undertakings to proceed on a well composed Modell, since Alterations in a well begun Building are very prejudicial.

Thirdly, It Notes the distinction between the well ordering of the Palace of a Sovereign, and that of meaner Habitations; and it cites some remarkable Structures, as that between *Babylon* and *Espahan*, at a place called *Carimonsbaran*; as also several remarkable ones in *Europe*; It omits not the Description of Princely Stables, and the neces-

sary Offices to their Palaces, (as well as rooms of State, for great Feastival Shows, and ordinary use.) It also points at several incongruities committed by Surveyours; and who minded more to show that they were skill'd in describing of Columes, Pilasters, Cornishes and Frontispices, (though for the most part placed as the wilde *Americans* are wont to put their Pendants at their Nostrils) then to have studied Conveniency, and what most Necessary.

I shall now in the following lines treat more particularly on the matter by way of Counsel and Advice to all *Builders*, &c.

Whosoever is disposed to Build, ought in the first place to make choice of a skilful Surveyour, from whose Directions the
several

several Master-work-men may receive Instructions by way of Draughts, Models, Frames, &c. For the better managing their intended work, since an ill built Palace leaves a perpetual reflection of Ignorance on the Builder; whereas a compact Building, whether City, Castle, or House, like a stock of Children continue the Name and Memory of the Owner.

An Exact *Architect* must have *Surveyours*, the Art of Drawing, and Prospective; ought to know what appertains to each Inhabitants Conveniency: Since there is a vast difference between the House of Prayer, and a Princes Palace, and meaner Habitations, nor is a Laboratorium for a Chymist fit either for Baking, or Brewing.

Therefore he ought to know *Prospective*.

B 3

wherein

wherein is the use of Prospective, otherwise he will never rightly describe the demensions of solid Bodies, which are to stand high; his Circles will seem Ovals in Breadth, and his Ovals Circles, and all his contrivances will be at randome; as it is said of some men, who first act, and afterwards consider, excusing their mistake, which they thought it otherwise.

What to reflect on.

The Surveyour must in the first place consider the ground whereon the Building must be Erected, make a Distinction between a Plat in the City, and one in the Country; and then governe himself as the ground will give him leave; reflecting still on the Houses adjacent, and those which are opposite, if they be high to raise as high, if not higher, to prevent the smoaking of Chimnies. Se-

Secondly, He must place the Front of a Building in the Country towards the East, if the place giveth leave; by which means he may shelter his double Lodging Rooms from the North-west: He must cause all the back of his Stone work (which stands within the Brick) to be cut with a Rabar three Inches broader then the breadth of his James and Cornish; which will hinder the Rain (driven by a fierce North-west winde) to pierce into the inside of the Wall, and through the meeting of the Brick-work and Stone; whereunto the Morter affords the passage of the Water. It may be some will carp at this free Expression, pretending that Surveyours and Master Workmen (in this refined Age, which abounds in Books, with the Por-

*A Note Bene
to Builders.*

traçtures of the Out and Inſide of the beſt Buildings) are not to ſeek the firſt Points of their Apprentiſhip: Whom I aſk the reaſon, why modern and daily Buildings are ſo exceedingly Defective? And whether it is not be-
 cauſe many of them (if well conſidered) have been but Apprentices lately, and too ſoon become Journey-Men; And that Surveyours (who either affect more the Building to themſelves a ſtrong Purſe, or are blind in the faults which their Workmen commit) like careleſſe Poſtillions, haſten with the Packet-Maile to the Poſt Office, be it never ſo ill girted, whereby it oft falls in the mid-way.

The Count of *Villamediana*, a rare *Spaniſh* Poet, having heard the Answer of a Sonnet of the King of *Spaine*s Surveyour (to whom

whom the Office of the Surveyour was confirmed, by reason he had all the Drawings and Books of his deceased Father; and to excuse his young Experience, said, to make use of them) replied to the young Surveyor, *El azais come el Stomaco que come herbas y caga Mierda.*

The Count of Villemedi as his witty expressions concerning a young Surveyour.

The readiest way to try a Surveyor, is to put him to draw a ground Plot in the Builders presence, to make him describe the fittest place for a Seat, the ordering of Rooms for Summer and Winter; to Contrive well the Stair-cases, Doors, Windows and Chimneys; that the Stairs may stand conveniently to the Stories, Doors and Windows; so placed, as that they may not be inconvenient to the Chimneys; the Bedstead place far from Doors and Windows, and

How to try the capacity of a Surveyour.

and of a fit distance from Chimneys.

Distinction
between the
height of
ceilings of
Rooms.

And as for height of Seilings, the Surveyour ought to make a Distinction between the height of a House, or Town-Hall; of a Colledge and that of a Church, the Hall of a private house, serving for the most part but for a passage, the others for a Receptacle of a whole Body (consisting of number of Persons) who for an hour or two joyntly breath in one place, and the which may be Offensive.

Natural
Effects of
Air.

Nature of 'Air being to ascend, and when it meets (with a sudden opposition it spreads; Since the Nostrils (as the Pipes of Bellows) will attract to each Persons Brains the scent which is composed of that Steam.

The Surveyours skill and discretion will also be discovered by

by the well contriving of the respective ceilings of common Rooms, and Closets for private use; For as Rooms of State ought to be of an equal height, the ceiling of a Closet (ten foot square, less or more adjacent to a Bed chamber of State (which may be thirty foot wide, forty in length, and sixteen or eighteen foot high) would be preposterous, inconvenient, and like a Barbers Comb case, Staircase, and Steeple-like to hang Bells in.

A good Surveyour sheweth his Art, both within the Building, as on its Front; and in the fit mixture of Materials, Morter, Brick and Stone, being sympathick stuff.

As for the manner of the Outside of a Building, there is a necessity for mouldings about
 necessity for mouldings about
 Win-

Windows, and Door Frontispieces, or Cornishes, none about Barns, Malt, Brew, or Glass-houses; whereof the outsides (especially a Barn) hath no opening of Windows, so as the Rain and Droppings of the Thatch falls not in them, but onely on the ground. But as for Cornishes and Frontispieces over the Windows of a meer Habitation, being to it of the same use, as the broad Brim of a good Hat is to a Traveller in a rainy day.

Ornaments, The good Surveyor will order Ornaments to the Front of a Palace, according unto its situation; shun too much carved Ornaments on that upright, whereas the Southerly windes raise much dust; And though the *Italian* saying maintains, *Per tanto variar Natura è bella*; Yet must the good Surveyor use

use moderation in the ordering of Ornaments; shun in the first place, those Spectacle-like cant Windows, which are of Glass on all sides; For it may be supposed that the Inhabitants of such Houses and Rooms with Cant Windows (exposed to the Northwest) may well imitate a merry *Italian* Fisher, who (in a Winter windy, rainy day) had been stript to his skin, and having nothing left to cover him save his bare Net wherein he was wrapt (sitting on the high-way) put his finger through one of the holes, asking to passengers what weather it was without doors.

Bay or cant
Windows
Inconvenient.

The expert Surveyor will re-part the Windows to the front of a Palace, that they may (besides the affording of sufficient light to the rooms) leave a solid

How Windows ought to be placed

Ridiculous
Ornaments.

solid peeres between them and to place some pleasing Ornament thereon, not prejudicial to the Structure, nor too chargeable for the Builder; shunning incongruities, as many (pretending knowledge in Ornaments) have committed, by placing between Windows Pilasters, through whose bodies Lions are represented to creep; as those in *Queen street*, without any necessity, or ground for the placing Lions so ill, which are commonly represented but as Supporters either of weight, or of Arms in Heraldry.

The Order
to be observed on the
Front of
Buildings.

He ought further to imitate the old *Grecians* and *Romans*, in placing the rustick order next to the ground, as being most proper, both by reason it is the most solid of all the other orders; and that no blemish appeareth in the
Rustick

Rustick so soon as in a smood ashler.

The reason also for contracting the Balconies within the upright of a Colmn is, that weight is not prejudicial when it rests on its Center, no more then the great weight of Bels in a Steeple, if hung plum with the upright.

Concerning
the placing
of Balconies

Moreover, He orders his top Cornish according unto the the weight which is laid upon it; For if the Builder (to spare charges of Rails, Barresters and Pedestals with Ornaments of Balls) will have the Building to have no other finishing, he must lay a course of Stone on the Cornish, to keep the Walls dry, and clap up a fillet of Lead: As good Carpenters do frame their Rails to Barresters to meet on the Pedestals, under the neck of the

Concerning
the upper
part of a
Front with-
out Rails
and Barre-
sters.

the Ball, so as the Rain doth not enter to rot them.

The use of
Prospective. A Surveyour (well versed in
prospective) doth order the
Cornishes and Ornaments according unto the height of the
Stories: He ought to know what
Diminution, Altitude doth
cause; there is none perceived
on the Latitude of an Horizontal Line: Longitude represented by lines drawing to a Center
from the Latitude, causeth also
a Diminution in the Eye

The *Grecians* and *Romans*
Surveyours, have ever been accustomed to make their Cornishes and Ornaments about
Windows, of the upper Stories to be bigger then on those of the lower; which *Michael Angelo* did observe in the *Architrave*; *Freeze* and *Cornish* on the top of the *Frontispiece* of the *Cardinal Farnese*

Farnese his palace in Rome.

Raphel d'Urbis and *Albert Du-rer*, drawing a Steeple on the first ground of a board or cloath, whereon they did represent the figure of a man, standing (as it were) in the upper gallery; made the figure of that man of the same height of another which was to be set at the foot of such a Steeple; because there is no diminution of forme on a perpendicular Line, which is set close to the edge of a cloath or board; A point at the foot, or at the top, is but a point, it being only distance from separated lines (drawn to a Centre) which causeth a Diminution as to the sight.

*Raphel and
Albert Du-
rer, their
method in
Dimensions*

Therefore all Surveyours ought to cause the wooden Molds (on which Masons must work, to be tryed by lifting
C them

them as high as the Stone or wooden Figure is to be placed ; to see how it may please the Judicious Eye ; which is the best Jury and compass.

What form
of Doors,
prove a
weakening to
a Building.

Now concerning the well proportioned Doors and Windows ; Every man reflecting on Stature, ease and conveniencie needs not to call to his Neighbour for to counsel him in this necessary proportion , since it must be granted, that if Doors and Windows (in a solid Building of Stone or Brick) were as wide as they are high ; it must through necessity be a weakening to a Building.

The wideness of the Door, must be to serve for two to pass at once, that is to say, the Doors of Chambers of a Pallace, the height of the Door the double of its width ; all other Chamber doors

doors of a convenient height for a man of compleat stature, to pass with a hat on his head: A gate for Coaches and Carts laden likewise fit to the purpose.

Windows (because the light comes from above) must be higher then wide, the middle Transoms of them above six foot (which is the common stature of a Man) since otherwise the middle Transome would be opposite to a mans eye, hinder some to the free discovering of the Countrey.

The leaning height of the Windows ought to be three foot and an half; since if otherwise it will be incommodious, for being lower, it would require the bending of the back, which old men (when they have spent money and time in building) will

Why Windows must be high.

The leaning height of windows.

will not find ſo eaſie, as ſome wanton perſons, who it may be will affect low leanings, to make uſe either to ſit on, and break the Glaſs windows, or to ſhew themſelves in Quirpo to paſſengers.

The height
of windows.

The height of Windows and Doors, muſt be as much again as they are wide; becauſe they will otherwiſe offend the judicious eye of perſons who reflect on the former annotations, that ſhapes do alter by diſtances of place; as an Oval ſeen from beneath, will ſeem to contract to a Circle; contrary to the ſenſe of ſome Children, in whoſe ſight their Parents ſeem extream tall, becauſe they are low themſelves; But ſome Builders, (as Painters of a low ſtature) affect to make Figures, door-ways, and Windows, according unto their own height. A

A good Surveyour shuns also the ordering of Doors with Stumbling - Block - Thresholds, though our forefathers affected them, perchance to perpetuate the ancient custome of Bridegrooms, when formerly at their return from Church, did use to lift up their Brides and to knock their heads against that of the door, for a remembrance, that they were not to pass the threshold of their House without their leave.

Thresholds
an old cus-
tome.

The doors ought to be all on a row, close to the Windows, to gain Room, that when the doors are opened, they may serve for Skreens, and not to convey wind to the Chimney.

The plac-
ing of
Doors.

The Hearth of a Chimney ought to lye level, without a border, raised hearths being dan-

The inconvenience of raised hearths to Chimneys, generous for the falling of coles on the boards, and likewise troublesome.

The Chimney mantles ought to be all of Stone or Marble, but if (to spare charges) the upper frame, sides and top be made of timber, it will be most seeming to have them painted as Marble.

The use of spaces between the Chimneys.

And if the building cannot suffer the Chimney to be made even with the upright of the wall, both sides may be made up to serve for hoards, if they are roomes of State, but if of common use for Cabinets.

It is necessary to cover the top of Chimneyes to keep out raine and Snow; the smoak-holes can be very conveniently made on the sides of the heads of them.

Roomes on moist ground to be paved.

Roomes on moist grounds, do well to be Paved with Marble, because the boarding otherways is

is much subject to rot.

A good Surveyour shuns the making of Timber partitions in the undermost Story.

No Timber partitions to be suffered in the first Story.

He contrives free access to the double roomes, without making them through passage whereunto the well placing of the Staires contributes, either by convenient passages about or under them; the composing of a fit and easy Staires being a Masterpiece, fit in respect of the place, convenient if the steps be deep and Low in the rise, for a straight ascending or descending (without bending of the sinewes) gives most ease to the body which doth rest better on his bones, then on Sinewes.

Deep and low Steps the best.

The good Surveyour doth contrive the repartitions of his ground-plat, so as most of the necessary Servants may be lodg-

ed in the firſt ground ſtory;
whereby there will be leſs di-
ſturbance, leſs danger of fire,
and all the Family at hand on all
occations.

Finally, he ought from time to
time to viſit the Work, to ſee
whether the Building be perfor-
med according unto his directi-
on and Moulds.

*The ſecond choiſe to be made,
is, that of a fit Clark of
the Works.*

A Clark of the Works muſt
be verſ'd in the prizes of
Materials; and the rates of all
things belonging to a building;
to know where the beſt are to be
had, provide them to the Work-
mens hands, to prevent a retard-
ment in their ſeveral proceed-
ings;

ings; that the Carpenter may not stay for the Brick-layers, nor the Brick-layers, nor Masons for the Carpenters; he ought also to note in his book the materials, and all necessaries as they are brought in, distribute them orderly; and though Nailes to some seem not very considerable, yet ought the Clarke of the work to be discreet in the distributing of them to some Carpenters, whose pockets partake much of the Austruches stomachs; his eyes must wander about every Workmans hands, as on those of the Sawyers at their Pitt, that they waste no more then needs in Slabs; on the Labourers hands in the digging of the Foundations, for the Brick-layers that all the loose Earth be removed, and Springs observed.

That

That no Car-men turne or tumble down their Bricks, but the Labourers to take them out of the Cart, and pile them to prevent damage.

To ſuffer no ſammel Bricks to be made uſe of, not ſo much as in the choar of a Foundation.

Concerning
Brick-layers,

The Brick-layers to lay no Foundation except the ground be firſt Ram'd, though it ſeeme never ſo firm.

Observed in
the foundation
of Solomon's
Temples.

No great and ſmall ſtuff huddled together in the Foundation, but laid as even as poſſibly can be, to ram it the better, and the more equall, and muſt be of ſolid hard ſtuff, with no concavities, daubed over with ſtore of Morter, which ſinks unequally, and is the cauſe of the unequall ſetting of the Work.

Likewiſe to watch the Brick-layers hands, to uſe often their
line,

line, and plum-rule, make small scaffling-holes, and never (if possible be) suffer them to begin their Scafflings in the morning, but before their leaving off their work; for if in the morning, most of them will make it a day of gathering of Nuts and Fruit (if they are in the Countrey) and therein spend the best part of their day; and one must not permit them to take the best boards and other stuff for their Scafflings.

No making
of Scaffling
in the mor-
ning.

Item, See the Morter well tempered, since if unequall in thicknesse; that which is thin, will cause the work to settle more in one place then in the other, and the joynts to spue out the Morter; especially of work made at the latter end of the year, when no brick-work without doores ought to be laid, for that

Concerning
Morter,

that it hath not had sufficient time to dry thorowly; and will therefore by the setting of the work in the after-season, be so much the more retarded, and be the worse to the Building, Hangings, or Wainscot set up against it.

Moreover, to see the Brick-layers take good solid Bricks to hue, since if any thing sammel the work will molder away; and every night to lay bords on their work to keep it from raine.

Concerning
Masons.

It is to be noted, that the Mason must work no Stone with Sandy veines, or that which (having been new taken out of the Quarry) hath been exposed to Rain, Snow or Frost.

As for the workmen, that must observe exactly their Surveyours Molds, and work close and neat joynts, use but little
Morter

Morter between them, not only because much Morter will be washed away, but that Cornishes will also appear as a ranck of open teeth, and they must not forget to shoare the middle part of the head of the Windows, as well as the sides, to prevent an unequall settling of the work, and consequently cracks, both in the Heads, James, and Sils.

As for the Dimentions which the Masons are to observe in their work, in reference to the orders. They must divide the Tuscan, Column, or Rustick, Base and Capital (which is as much to say as feet and head) seven times its thickenesse, the Architrave, Freeze and Cornish one fourth part of the Column with Base and Capital.

If they make the said order
without

without a Peſtall they muſt divide its whole height into 17. parts and a half, which (in their vocation phraſe) are called Models, and are divided into 12. equall parts; If they are directed by their Surveyour to make them with a Peſtall, then are they to divide the whole height into 22. and one ſixth part, for that the perfect ſhape of the ſaid Order requires a Peſtall, which muſt have a third part of the Column, with Baſe and Capital.

Nota.

It ſeldom happens that a Peſtall is put to the Tuſcan Order, becauſe (as it represents an Atlas) and that no man will take a Dwarf to reach to the firſt Story of a Building) the ſaid order requires, not to be ſet as a Candleſtick on a Cubbert, its as a Subſtantive, that can ſtand without an Adjective: Some

Venetian

Venetian Ladies, must have their Shoppins to stand on, and were they as strong as the *Tuscan* they would not need some of their *Masaras* to lean upon.

But as for Pedestalls to the other following orders; a Builder shall do well to see the *Masons* observe this general Rule; That the Pedestalls with their Ornaments, must be one third part of the Column with its Basis and Capitall (feet and head as aforesaid) even as in the Ornaments above the Architrave, Freeze and Cornish, must make one fourth part of the same.

Dimension
of all Pede-
stals.

This must then be understood as followeth, *viz.* The *Mason* must in the making any of the *Freeze* orders, divide the height of the Column with its Ornament into nineteen parts, then take the height of the Column with its
Basis

Basis and Capital, and make the divisions of the Models according to its order.

Names of
the ſeverall
Forms or
Moldings
on the body
of the Co-
lumn.

Now the names of the ſeveral formes on the body of the Column are, *viz.* theinging over of the Capital under the neck; Then followeth the Freeſe, the Liſt, the Ovolo, the Cimatium, the liſt of the Cimatium, the Architrave, the liſt of the Architrave, the Freeſe, Gul or Throat, the liſt, the Crown, the liſts or Rule, the Round; and finally the Ovolo. And the Clarke of the Works ſpeaking in theſe termes, will be as well underſtood by the Maſons as one at Sea among Mariners; ſaying, Steere, or Lar-board.

Concerning
the Dorick
Order,

Item, If the front of the Building is adorned with the other orders (as the Dorick is) to follow the Tuſcan, this proportion
muſt

must be observed, *viz.* The height of the whole Column with its Base and Capital, must consist in 20. Models, that is to say, a Dorick Column without a Pedestall; the Modell must be divided in twelve parts, the foot with the nethermost band must be one Modell, the Column between the Foot and Head 14. Modells, the head one. The Architrave, Freeze and Cornish, is to be one fourth part with the Head and Foot, so as this makes up the aforesaid Number; and such a compleat Form, as is neither to be controuled nor mended, & is that which the *Grecians* and *Romans* have found to be a Dimension sunk down from above, as all those who have made it their respectfull observations of the Dimensions the Creatour hath been pleased to give to the

D Micro-

Perfect concordance among the dimensions of a mans body.

Microcosme Man, they have found that there is a perfect concordance, amongst them, a Body consisting of so many Modells of so many height of Heads; A Head of so many distances between the one Eye and the other; nay even in the gaping of a well-proportioned Mouth, except forced by a kinde of Screw or Gagg, which may break the Jaw-bones asunder.

Proportion of open galleries with Columns.

If the undermost part of a Front (as many Palaces in *Padua*, and other Cities in *Italy*) is left open as the Gallery in the *Bedfort-Piazza*; The Indisputable, best and truest proportion to be observed therein is; if according to a Dorick Order, the Height must be divided into twenty parts, one of those must be the Model; the distance between the two Pilasters are three Models

dels, the wideness of the Arch, half the length of the Column, which is set out in the midst of the Pilaster, one third part of a Model more then its half, which is to be generally observed in all the other orders; This is for Galleries with Columns without Pedestals; but Galleries, with these the Column must be divided into twenty five, and one third part which makes a Model; the breadth of the Pilaster must be five Models, and the distance between the Pilasters ten Models, the half of the height of the Arch, which will make that perfect shape as must satisfie all Judicious Eyes. *Item*, It must be remembred that the height of the Pedestal of the Dorick must consist of five Models, and one third part: And as for Ornaments (as Imbrodery or Lace on

good Stuff) they are as various as the occasions of the owners may require, or those things whereunto their Genius doth tend; if Warriours, Trophies; if men of Peace, Olive-branches; and all what affrights not.

Division of
the Ionick
Order.

The *Ionick* Columns, their height must be of twenty two parts and a half; each Model being one of the twenty, must be divided in eighteen, because it stands so much higher, as distance (which then contracts the work) requires more height; since otherwayes the third story of Columns would shorten so much, which is the fundamental reason that Prospective must be observed by a good Builder, and not yielded to the particular fancies of some of them.

The Architrave of such a Column

lumn must consist in one, and one quarter Model of the eighteen, the Freese of one and a half, the Cornish one and three quarters, which being added together, makes four Models and an half, and the one quarter of the *Ionick* Column, the Base and Capital comprized.

In the making Galleries of this order (which being most slender and more tall) the breadth of the Pilasters must be three Models, the breadth of the Arch eight and a half, since the height must be seventeen Models, which is twice the breadth; but if these Columns are set on Pedestals, then must the whole height of them be divided into twenty eight parts and an half, allowing six Modeles for the height of the Pedestall with its Ornaments, and so it will fall out, that as the

D 3 breadth

breadth of the Arch ſhall be eleven Models, the height twenty two, the breadth of the Pilasters four, and ſo a proportionable Body to the height of the Story, and the weight it is to bear; which is one of the main conſiderations of a good Builder; when to the contrary, Columns ill proportioned and ill placed, prove often a weakning to a Building, and ſeem as Organ pipes to ſtand in the Ayre for a ſhew, as Corniſhes too broad, happen the ſooner to decay; but to this order there ought to be one third part of a Model.

Ill effect of
two broad
Corniſhes.

To proceed on the form recommended to a good Clark of the works, to call upon every Workman of the Maſons to ſee them performe according unto ſuch exact patters made in good Wainſcote; The next is
the

Which
doth not
ſhrink.

Divisions of
the Corin-
thian order.

the Corinthian, who if without Pedestals, must be divided into twenty five Models, and those into eighteen parts; the distance between the Columns foure Models, and two third parts of a Model; Because the Architrave about it may not bear too much, and that the Models in the Cornishes may be just over the middle of the Column.

But if Arches or Galleries made of this Order; the distance between the Pilasters must be nine Models, the height to the top of the Arch eighteen Models, and the breadth of the Pilaster three Models: Galleries with Pedestals must be divided in thirty two equall parts, and one of them a Model; the distance between twelve and the height to the top twenty five, one more then ordinary,

because the height doth diminish the proportion of its true height; to the Pedestal seven Models, &c.

Composite
Order.

The Composite Order must be made of the same proportions of the Corinthian; all the difference between them is only in the members of the Head and Foot, as all Surveyours and Master Workmen shall finde this to be most true; After they shall have compared all the best grounded Authors of the *Greeks* and *Romans*, and that here is not an *Iota* differing from them; for it is a Rule as certain, as that without the same, there cannot be a perfect building made, no more then a man could without good Orthographie write true English; so as no man can have just cause to say, there is a new Rule prescribed unto them, since
it

it is the same which will be found in all true Books concerning that matter; It is the Rule of the Ancient Masters, whose Reliques to be seen throughout most places of *Italy*, makes many Strangers that come there gape so wide, as that they need no Gags. Let them but look on the Columns of the Temple of Peace and the Pantheon in *Rome*, they shall see more men that gape after them then in c-ther parts: Pipers and Potters to sit in Tavernes, and they shall finde in those lovers of Art an Humility, as hinders them to crack, and boast never to utter, *Well enough for the time.*

Most of the *Italians*, being of the humour of the old Carver, who had ingraven his own Name and Portraicture so deep in the shield of *Pallas*, as it could
never

never have been put out without defacing the figures; they work for a perpetual fame, which a good Clerk of the works is to recommend unto the Workmen committed to his charge,

Concerning
the Car-
penters.

That the Carpenters be good husbands in the managing of the Builder his Timber, in the cutting of their Scantlings, their sparing to make double Mortises, which do but weaken the Summers. 11191

To lay no Gerders, which are needless and hinder some to the boarding of a Room, no Summers to be laid, except the ends of them are either pitched or laid in Loam, to preserve them from rotting, as is done by the heat of Lime whereof Morter is made; And therefore in *Italy, France, Germany*, and among the most prudent and solid Builders, the free

free Masons put stone Cartoefes in the top of the inside walls, which are bearers to the Summers, as such Cartoefes are seen in divers Churches, and some of them are carved in Ornamental Figures.

Item, The Clerk of the Works must have a care to see the Carpenters to cock the main Beams into the Lentals, to hold the wall the better, that they pin down a Plank (three inches thick) all along the top of the Summer, to hold fast the Brick work, after the Brick is raised to the height of the Summer, and that the Joyces be framed 2; or three inches under the top of the Summers; that for the boarding rooms smooth, the Carpenters lay Bridges overrhwart the Joyces, joyned in the top of the Summers, that the Boarding be

The manner of the Carpenter to lay his Timber.

be with breaking Joynts, which is the phraſe of the Workmen and is the manner of flooring of roomes of Note.

Height for
Doors and
Windows.

That doore caſes (well ankered into the wall) be made as high again as they are wide, and ſo muſt well proportioned window caſes be, both for giving better light (which deſcends from above) and that the peerers of Brick or Stone between them, will fall to be a fit width to be a ſtrengthening to the building.

Item, The Clarke of the works muſt be very carefull not to ſuffer the Carpenters to lay any Timber under the Chimnies; ſince by the laying of Timber under them, many houſes have been ſet on fire and burnt to the ground.

He muſt ſee the Carpenters to obſerve

Scantlings
for substantial
Floors.

observe the Scantlings following, viz. (for substantial Floors of roomes thirty foot wide) Summers for the first seeling eighteen and fourteen Inches to be framed in such proportion as may serve to make an *Italian* fret Seeling. The Lentals eight and ten Inches square, the Joy-fes nine and three Inches; The Summers of the second Floor, fifteen and seventeen, to be beams of the Roof for the principal Rafter to stand on, and the like for the fret Seelings: The principal Rafter for the Roof to be at ten and eight at the lower end, nine and seven at the top; The Purlains for the Roof nine and eleven, single Rafter six and three Inches, and to be framed edge-ways, which Scantlings are fit for substantial Structures, but not usuall

Scantling
for Seelings
of rooms
thirty foot
wide.

sual in Lime and Hair Birdcadge-like Buildings ; Moreover he must not onely (as a true Clerk) with his Eyes follow the Workmens hands in the framing of their Work, and as before said, that no waste be made of the Timber, nor of the least Slab, nor of Brick, nor Brick-bats, nor Stone ; he must not suffer Brick Carts to overturn the load of Bricks brought to the Work, which is an insupportable abuse, but too often committed in the Countrey, whereby a world of good Bricks are reduced to morsels, and this by meer laziness of the Labourers, who (as better rationals in *London*) ought to take the Bricks out of the Carts and pile them.

Abuse committed with the overturning the loads of Bricks.

And as to a Building wherein divers sorts of materials are used, the care of the Clerk of the Works

Works must be on all of them, as well as on the least (as I said before in the distribution of Nails) as on materials of weight, as Sauder, wherewith an unconscionable Plummer can ingross his Bill. The Clerk is to see Sauder weighed and well managed, and in the attesting of Bills have a care not to pass his eyes slightly over them, lest when a Plummer sets pounds of Candles used about his Sauder, that trick prove as insupportable as that of one, who having played away a round sum of his Masters Stock in a Journey to the *East. Indies*, set in his Bill to have payed a hundred pound for Mustard.

He must likewise have a clear insight on the Glass pains of the Glasier; suffer no Green pains of Glass to be mixt with white. He

He muſt with his Eyes follow the Meaſurer of the Work, his Rod, or Pole; ſo the line where with the Joyners work is meaſured, that it be not let ſlide through the Meaſurers fingers ſince the Joyners works hath many goings in and out; and a *Leger de Mayne* may be prejudicial to the paymaſters purſe.

It were likewise better to agree with Painters, to have their work rated on running meaſure, and on the ſtraight, as the Carpenters work, who (being of an honeſt *Joſeph's* profeſſion) are as deſerving to be well paid as the Painters, who do but ſpend the ſweat of Wallnuts (to wit oyl) the Carpenters that of their brows.

Finally, the Clerk of the Works ought to be ſubject to the cenſure of the Surveyor, on the
the

the point of all the materials which are brought in.

And as for Noblemen (or others) Concerning the use of Timber. who have Timber of their own (and in whose grounds good clay for bricks is to be had, their best course is, to fell Timber (which they can spare, and intend to build with,) some years before it must be put to the Carpenters tools.

Likewise to manage the Concerning Foundations. upfal of the Timber. And as for the foundation of their building, it ought to be raised at first leaning height; and then to let it rest to settle, for if onely brought level with the ground, it will prove but as a receptacle of the wet that falls on it: and if but a foot high above ground, it will be pusht down again, but being leaning high, it will be preserved, and may be covered

E

if

if the moneth of *October* draweth on, when it's fit Trowel men should be dismiss't till the next Spring following.

Item, To cause the foundation of the intended building to be generally laid, without leaving any touchings, since walls new begun on them will settle more unequal then those carried on in an intire range: As for coverings of Buildings, Lead is best for Churches, for who would rob them but *Goths* and *Vandals*.

The best
Covering.

Concerning
blew Slates.

Blew Slates are most comely for a Noblemans Palace, they are not heavy as Tiles, nor do not soon rot, nor gather an unpleasing moss; besides that when some of the slates are broke, the Slater mends them with little charge; a rooff coloured with them is of an equall colour, when

when as red tiled rooffs the least breaking of them makes great chargeable work for the Tiler, who often removes ten Tiles to lay two new ones in their place; and renders the Noble mans roof, as a Beggers Coat.

As for burning of Bricks, if Concerning burning of Bricks. Noblemen care not to make a Bisme in their Parks or grounds, they shall do well to cause the Clerk of the Works to look well to the Workers of the Clay, for if it be not well wrought, the bricks will never be good.

It is usual to pay five shillings per thousand, for the making and burning of Bricks, the Clay digging therein comprehended; and all materials being provided to the Brick-makers hand.

But as for those who can have

Between
burning &
buying of
Bricks, but
fix ſhillings
and eight
pence difference in
twenty
thouſand.

Bricks from Brickills near at hand. And who love to keep their Park and grounds even and handſome, they may take notice that in the number of twenty Thouſand of Bricks bought or made, there is not above fix ſhillings and eight pence difference; *Example*, There goeth four load of Sand, which (with the carriage) coſt two ſhillings fix pence; in Straw to the making of twenty Thouſand of Bricks above five ſhillings; the Tools and bringing of water five ſhillings, the digging of the Clay ten ſhillings, charges for hedging, forty ſhillings; the preparing of the ground five ſhillings, beſides the making of a Kill, which will conſume for the making of twenty Thouſand of Bricks, fifteen load of Wood, at ten ſhillings the load; of
Bricks

Bricks burnt in a Clam (being burnt with Sea coals) there are at the least intwenty thousand; five thousand unfit for work; and though some Bricklayers pretend that Sammel Bricks are good enough to fill the Choare of a Wall, it is not so; Since most Sammel Bricks are no better then dust, and what resistance dust can be when weight is laid upon it, any rational man can judge by the several cracks in Walls, whereof the Choars are hollow; and therefore the description of the foundations of the Temple, and the Palace of *Salomon* bears, that it was made with smooth hard Stone.

The foundation of the Temple and Palace of *Salomon*.

Many Brick-makers are accustomed to dig the top spit (which is no better then dung) and to throw it with the other clay

An Item for
those who
do let out
ground for
building.

clay, and is the cause that many Bricks are brittle, so as in few years houses made with them, the walls thereof moulder away like dirt.

To prevent the being over-reacht with Bricks, they ought to be taken out of the clam by account from the Brickmaker, who undertakes to make them in ones ground, he is to keep to himself those that are not fit for use.

How to
measure the
Clay which
hath been
dugged.

The way for the Clerk of the Works to measure the quantity of Clay which hath been digged, is to measure the pit (out of which it hath been taken) square, which is six foot square, six foot in length, three foot in breadth, and three foot in depth, which makes one thousand of Bricks.

Men dig clay for six pence the thousand.

Lime

Lime digged in ones ground iscommonly burnt in a Kill, at four shillings *per* load; Lime bought cost four shillings a quarter, six pence a Bushel, forty shillings a load.

Those that mind the making use of Chalk in their walls, must be contented (if the ground hath springs) with the green molding which breaks through the whited walls within doors.

Inconveniency of putting Chalk in walls of Houses on Springish ground.

Walls about a Park or Court, may be filled with Chalk, which may be digged for eighteen pence *per* load, bought for two shillings and six pence the load.

He that desires to know how many thousands of Brick a Park wall, or that of the building of a house will require, can make his account on the description following, *viz.* A square Rod of a wall, two foot thick

The number of Bricks in a square Rod.

E 4 takes

takes nine thousand of Bricks, nine quarters of Lime to a Rod, nine load of Sand, at fourteen pence per load.

Some good Country Bricklayers do work at twenty seven shillings the Rod, the Bricks not being rubbed.

The rate of
Bricklayers
work.

Good *London* Bricklayers will work the Rod for forty shillings, rubbed Bricks, the inside for thirty three shillings, arches comprised.

The fittest bigness of a good brick, is nine inches and a half long, four and a half, and a half quarter broad, two inches a quarter and a half thick, which will raise a foot in the Morter with four bricks.

As for Lime, the refining whereof (according unto the *Grecian* and *Roman* manner, is mentioned in the former printed

ted discourse of the three Principles of Magnificent Building) the general custome in *Europe*, is to burn it in Kilns, which is a slow way. But if there were such a quantity of Wood as in the *Indies*, there could be more lime burnt in twenty four hours, then otherwayes in a moneth: The burning of lime in *China* and other parts of the *Indies*, being as followeth, viz. They make a round pile of great wood, leaving a cross hollow way through it from the bottom almost to the top, which is raised to a height according to the Circle, there is proportionably so much Stone heaved thereon as it will hold, the fire is put in the Centre, and in the middle of every cross way, and as it burns makes an Over-
ture at the top, and the Stone burning by degrees falls still
in

The man-
ner of burn-
ing Lime
in *China*.

in the middle of the pile, and of the Walks, which at last is covered with the Cinders of the burnt wood, and proves a most strong well burnt Lime; Which if it were mixt with *Holland Bricks* (called *Clinkart*, a yellow Brick as hard as Flint, bought for twenty three shillings the thousand) would make walls as durable as if of Marble, if not better.

The best
paving in
Stables.

Those *Clinkarts* are very fit for the paving of Stables, and walks in a Court, for they lye very smooth and close.

As for choice of Master Workmen,

King *Henry* the Eight shewed a good president (when the Serjeant Plummer calling

ling his Workmen to cast in his presence a Leaden Medal which was given him: the King told him he would have no walking Master Workman.

Those therefore which are fit to be imployed, are Working Masters, and not those who walk from one Building to another; since Journey-men will no more work well, then Souldiers fight without a fighting Captain; Feathers on a Captains hat, nor Compasses in Master workmens pockets do not the deed, nor will any Master Workman deny to have had as much more done, and well, by bestirring their Hands and Tools in their Workmens presence then other-ways.

This doth not entrench on those who are undertakers of Buildings, but insisteth onely on the
the

the necessity of sufficient Master Workmen, actually employed in every Work.

Master
Workmen
bound to a
precise
time.

The chosen Master Workmen must be bound to a prefixt time for the performance of their undertaking to observe exactly the Model and Moulds held forth to them by the chosen Surveyour, and to make good at their own cost what they do amiss.

Master
Workmen
to pay their
own men.

They are to manage the paying of their own Workmen; on such a Contract as they have made with the Proprietor of the Building; For the Master Workman must keep his workmen under a certain regular proportion of pay, to hinder them from spending their wages too fast, and to run to other works, as many (upon slight occasions) do.

To shun re-
prehending
of Master
Workmen
openly.

It is also very necessary to shun the reprehending of a Master Work-

Workman of any oversight before his men, but rather privately; since it would be to him as prejudicial as a check to a Commander at the head of his Troop.

As for the Builder and Proprietor.

IT is best for the Builder to buy his own Materials, have his Work done by the Rod or Square.

Have in reserve (to make good payment) such a stock of his own as he can well spare; and against mistakes of Workmen a stock of Patience.

Be a constant observator of the three chief Principles of Building; viz. *Solidity, Convenience, and fit Ornament*: Never suffer

suffer his Workmen to begin to build before the Moneth of *March*, nor to continue longer in the building of walls then until half *September*; remitting setting of walls until the next Spring after.

Observe the several Annotations in the former printed *Discourse*, on the three chief Principles of Building: concerning the well ordering both of Rooms of State and ordinary use and Stairs, the form of Offices and Stables; as also the contrivances and properties belonging to Gardens.

As for Prizes.

EXperience speaks that as times change, and occasions differ, prizes may alter; Nor is that

that which is best cheap, always the best profit, but Merchantable ware.

Bricks in some parts are delivered at the Work for 16s. 8d. the thousand.

Rates of Bricks.

Some will build a Rod 16 $\frac{1}{2}$ Foot square, 1 $\frac{1}{2}$ Bricks, all Materials comprised for 5 pound.

Rate of Brick work.

For the old Tiling at thirteen shillings four pence a square.

New Tiling at one pound five shillings a square, finding all Materials.

The straight Arches, at one shilling *per* foot.

The Flints, at four pence *per* foot.

The Cornishes, one shilling *per* foot.

Slating with blew Slates the Workmen finding all, will cost seven pence *per* foot, the workman'ship

manſhip onely will coſt three pence per foot.

Twelve thouſand Slates will make one ſquare.

Slates will coſt ſixteen pence per thouſand, delivered at London.

Prizes of
Timber.

Good Oaken Timber is bought in ſome parts of the Country for thirty three ſhillings per load, conſiſting of fifty foot; in and about London for forty three ſhillings, forty four, forty five, forty ſeven, and fifty, at the Merchants Yard.

White Fur, twenty five, twenty ſix, twenty ſeven, and ſometimes twenty eight, according as the ſeaſons be.

Yellow Fur (called Dram) being very good, forty five ſhillings the load, the names are theſe following; *Eſterrund, Weſtboele, Longlound, Lanrwat, Landiſor,*

for, Tonsberry, Holmstrand, Dram, Christina, Swinsound, Frederickstad, Hellevoane, Moss, Drontom, Bergen, and Stavenger.

The prizes of these Deals are uncertain, for according to the goodness so they are in price; for in all these places, there are both bad and good which generally are sold from four pound *per Cent.* to six pound *per Cent.* if ordinary length; long Deals which are about fourteen or fifteen foot long, are from seven pound *per Cent.* to twelve pound *per Cent.*

An Estimate of Scantlings and Prizes.

OF Oaken Gerders fifteen
inches one way, and eleven
F the

the other, two pound ten shillings.

Oaken Gerders thirteen Inches one way, and eleven the other, two pound two shillings.

Joyces seven Inches one way and three the other a square, two pound two shillings.

Firr Gerders fourteen Inches one way and nine the other, one pound eighteen shillings.

Firr Gerders twelve Inches one way and nine the other, Joyces six Inches one way and three the other at a square, one pound sixteen shillings.

Oak Roofing raising pieces, eight inches one way, six the other; Purloyns nine inches one way, and seven the other, one pound fifteen shillings.

Principal Rafters nine and six at one end, eight inches and five inches the other, small Rafters
three

three inches and four inches at a square, *ibid.*

Of the same Scantlings of Firr at one pound nine shillings.

Oaken Carcass, ground plates nine inches one way, seven inches the other; Story posts backwards nine inches one way and six inches the other, prickt posts. Interdices and Braces seven inches and five inches, quarters two and four, the other second Story posts eight inches one way and six the other, prick post seven inches one way, five the other; interdices and braces six inches one way, and four inches; third and half Story posts to be seven inches one way, five the other, interdices or braces five one way, and four the other, quarters two and three at a
L F a square,

ſquare, one pound fifteen ſhillings.

The ſame Scantlings of firr, one pound nine ſhillings.

Partitions at a ſquare, eighteen ſhillings.

Seiling Joyces on Cellaring, ten ſhillings.

Oaken Windows with a double Rabet and with an edge on the one ſide as a light, three ſhillings ſix pence.

Ivory doors glued and Battened at nine ſhillings.

Joyners Work.

FOR Columns all under twelve inches, at ſix pence an inch, upon the Diameter of the Column.

From twelve to fifteen inches at nine pence an inch, upon the Diameter

Diameter of the Column.

From fifteen to eighteen inches at twelve pence an inch, upon the Diameter of the Column.

All Barristers at one penny an inch upon the Diameter of the Barrister.

If the Barristers be two inches over, it is two shillings a dozen.

Three inches over, is three shillings per dozen, and so to six shillings a dozen.

Heads and Pendills four inches Diameter, at four pence a head, six inches Diameter, six pence a head.

Balls twelve inches Diameter, at two shillings six pence a piece.

Balls eighteen inches Diameter, at three shillings a piece.

This work hath been done cheaper by some which do not

very well underſtand the Trade.
Item, Manger, Rack, and Plank-
 ing of a Stable is eight ſhillings
 per foot in length, the ordinary,
 five ſhillings.

Carvers Work.

THe upper work cut with
 leaves at fix pence per foot.
 The wave with Lace under it,
 at one penny per foot.

Small Beads with round ones
 and long ones at one penny, and
 half penny a foot, the edges and
 anckers at four pence per foot,
 the lower Wave with leaves, at
 four pence the foot.

The round Freeſe eight inches
 deep cut with leaves at one ſhil-
 ling eight pence per foot.

The Wave on the Architrave
 cut with leaves, at ſeven pence
 per

per foot; Beades in the Fasia, cut at round, at two pence a foot.

The single gallace five inches and half broad, twelve pence per foot.

The upper Wave cut with Leaves, at six pence per foot.

Great Beads round and long together, two pence half penny per foot, the edges and anckers at four pence per foot.

The Dentiles at three pence per foot; the lower leaves with flowers, at four pence per foot.

The Freeze six inches and half deep, and cut with Capitals, at nine pence the foot.

Flowers for the Cross work in the gallace in these quains, a foot over, and seven inches deep, cut with Leaves and Beads, at eight shillings per piece, the workmanship onely.

The Capitals of the Pillars for the Stairs coming out of the Lodgings into S. James's Park, coſt twelve ſhillings per piece the Carving.

The Cartoeſes of the flat form coſt two ſhillings ſix pence a piece.

Concerning a Rooff.

A Rooff being forty foot long and twenty foot wide, the principal Raſters ten and ſeven inches, Purloyns the ſame, Plates the ſame, ſmall Raſters four and five inches, will take ſix Load twenty ſix foot of Timber; one ſquare thereof will be twenty ſeven foot.

A Roof being as aboveſaid in length, and with the principal Raſters being eight & ſix inches, the

the Purloyns the same, the Plates the same, the small Rafter, four and three inches; the Coller beams eight and three inches, ten foot long, will spend four load twenty eight foot of Timber, one square nineteen foot.

A Roof being as abovesaid, the principal Rafter being seven and five inches, the Plates the same, the Purloyns the same; Small Rafter four inches and three inches, the Coller beams seven and three inches, ten foot long, will require three Loads twenty four foot of Timber, one square fourteen and a half foot of Timber.

A Roof being as abovesaid, the principal Rafter six and four inches, the Purloyns the same, the Plates the same; small Rafter three inches, Coller beams

beams seven and three inches, ten foot long, will be two loads and a half of Timber; one square is ten foot and three quarters of Timber.

Partitions.

THe principal Timber six and seven inches, quarters four and two, one square will be twenty foot and an half of Timber with door posts.

The principal Timber five and six inches, quarters four and two, will be nineteen foot and a half of Timber.

The principal Timber five and four inches, quarters four and two, one square will be thirteen foot of Timber.

The principal Timber four and three inches, quarter three and

and two, one square will be ten foot of Timber.

Floors.

A Floor being forty foot long, twenty foot wide, the Summers fourteen and twelve inches, the Joyces three and twelve inches, will be five load of Timber; one square is thirty one foot and a half of Timber.

A Floor as abovesaid, Summer thirteen and eleven inches, Joyce three and eleven inches; one square will be thirty foot of Timber.

A Floor as abovesaid, Summer ten and twelve inches, Joyces three and ten inches; one square will be twenty nine foot of Timber.

A Floor as abovesaid, Summers

mers eleven and nine inches,
Joyces three and nine inches;
one ſquare will be twenty five
foot of Timber.

A Floor as aboveſaid, Sum-
mers eight and nine inches, Joy-
ces ſix and three inches; one
ſquare will be fifteen and a half
foot of Timber.

Architrave door caſes, the
Poſt eight foot high, four foot
wide, the Poſt being nine and ſe-
ven inches, is twelve foot of
Timber.

Architrave door caſes, the
Poſt ſeven foot high, three foot
and a half wide, the Poſt being
nine and ſeven inches, is twelve
foot of Timber.

Architrave door caſes, the
Poſt ſeven foot high, three foot
wide, the Poſt being ſix and
ſeven inches head and ſoyle,
the

the same is seven foot of Timber.

Architrave door cases, the Post seven foot high, three foot wide, the Post being six and five inches head and soyle, the same is five foot of Timber.

These particulars are to be understood, as if the building were to be measured after it is framed.

So that this is no just rule for the quantity of Timber, by reason there is a great deal of waste in the sawing, and bringing of the Timber to a square but the larger the Timber, the less waste there will be; and the nearer to these proportions.

In this work, there must be an allowance for the waste of the Timber, for the benefit of the Carpenter, in case the Timber

ber be his, if not, to the Proprietor of the building.

Girt measure of Timber is the best for the buyer, because there is more in the circular measure than in the square; this is used in the Country, in London not, the Timber being squared before it be brought to London.

The Plasterers Work.

ONe hundred of Lathes will cover six yards of Seiling; and lathing is worth six pence the yard, one hundred of Lime will lay ten or twelve hundred of Laths.

Plaster of *Paris*, the Workman finding all, is worth one shilling a yard, upon brick work
it

it is worth sixteen pence, or eighteen pence the yard.

Rough-cast upon Lath being very well done, is worth eighteen pence the yard, upon brick work it will be done very well for twelve pence or ten pence the yard.

Rough-cast upon Lath-work, the owner finding all, is worth eight pence the yard.

Upon Brick-work, or Stone, is worth six pence the yard.

To Lath and Jay with Lime and Hair, the owner finding all the stuff, it will be done for two pence a yard.

Plastering upon Lath, ten pence a yard, some have done it for eight and nine pence the yard.

Plastering upon Brick-work at four pence a yard, and some for three pence a yard.

White

White-waſhing and ſtopping,
at three pence a yard.

Plaſtering of Lime upon
hart-lath is worth two pence
the yard, ſome have done it for
ſix pence a yard, and two pence
rendering with Coat of Lime
and Hair on it.

Greenwich plaſtering, to be
lathed and laid with Lime and
Hair, and a Coat of fine plaſter,
the Seilings and Partitionings
at one ſhilling two pence a yard,
in Town; one ſhilling five pence.

A Corniſh with two faces, all
of it two foot deep, at two
ſhillings ſix pence a yard, run-
ning meaſure; a Corniſh at the
foot of an Arch, ſealing done
with Lime and Hair, eleven in-
ches deep, at one ſhilling nine
pence the yard.

Architrave, Freeſe, and Cor-
niſh of three foot, three inches
deep,

deep, done for three shillings two pence a yard, running Measure.

Plasterers work in Fret Seilings.

A Fret Seiling as at *Summer* set-house, in the Privy Chamber, and in the Drawing Chamber, done with square Ovalls round; with a Cornish round about the roomes, the Fret having a double golose in the bottome, and a Cornish on the side, six Inches deep, and all the members enriched according to the moulds therewith measured flat in square yards without girting the work with a Line, is worth six shillings the yard square.

Whiting and Stopping of fret
G Seelings,

feelings at two pence a yard, whitening and ſtopping of old plain walls and feelings at one penny a yard, whittings of new walls at three pence farthing a ſquare.

The workmanſhip onely in Lath and Lathing three pence the yard, rendering two pence a yard.

A Friſe made with folding two foot deep, at five ſhillings a foot running meaſure.

Fret feelings the moulding, fix Inches deep and full of work, with enrichments in the moulding and ſouldage in angles and ſquares, the workmanſhip only at five ſhillings a yard, meaſured flat.

One Tun of Playſter of *Paris* will lay twenty nine yards of Lath work, three quarters of an Inch thick, one Tun will lay as much again upon Brick-work.

Walls

Walls done in faire black for
a Tennis Court, at one penny a
yard, the workman finding all.

Glassery.

THe best French Glasse
wrought with good lead,
well simmoned, is worth six-
teen Pence a foot.

The best English glafs wrought
with an Arch well leaded, and
simmoned at seven pence a
foot.

Ordinary Glafs for quarries
at five pence half penny a foot.

Painters Work.

FOr a fair Stone colour in-oyl
upon windowes and doores.
at twelve pence a yard.

For a Timber colour in oyl, on doors and windows, at ten pence a yard.

Wainſcot put into Wall-nut red colour, in diſtemper at ſix pence a yard.

Painters work of ordinary lights of windowes in oyl, at ſix pence a yard.

To lay a fair white colour in oyl, on Corniſh of Timber, and on ſtairs, and Rails and Barristers fourteen pence a yard.

The laying over a Wall white in oyl, twelve pence a yard.

Painting of the faireſt green that can be in diſtemper, and varniſht, is one ſhilling a yard.

Frames ſeven Inches and a half broad gilded, the ground a Timber colour coſt three pence farthing for one Inch broad, and a foot in length.

Other

Other rich carved frames, painted and gilded, the gold fifteen inches broad, the ground a fair white colour cost five shillings a foot.

Painting in white and gold, upon flat moulding, and set off with shading, like carving one inch board, and a foot long is worth four pence or five pence a foot.

Painting the outside of ordinary windows, is at three pence a light, and some at two pence a light.

Door case and doors at two shillings apiece, the outside only.

Gilding, for Workmanship of the gold, at twenty shillings a hundred.

Nota, The Painters are to colour over their windows thrice.

Smiths Work,

IRon Barrs, Hinges, Bolts, Staples, great Hooks, are worth three half pence the pound weight, Croſs Garners four or five pence the pound weight.

Iron Caſements about two foot high, three ſhillings ſix pence apiece, and others according to their bigneſs.

Concerning the Plummer.

EVery foot of New Lead ſquare, is worth thirteen or fourteen ſhillings the yard, beſides Souder at nine or ten pence the pound.

In exchange of old Lead for
ſheets

sheets new run, is allowed three shillings in every hundred weight for waste.

Every square foot of Lead run thin, to serve for gutters; weigheth commonly six or seven pound, if old eight or nine.

Leaden gutters are at twenty shillings the hundred.

The Masons Work.

FOr the Base called Gross-table, at the bottome of a building, seven pence *per* foot.

For an Architrave of eight inches to a Window, eight pence *per* foot.

For a Frieze to that Architrave six pence *per* foot.

For the Cornish (being about ten inches thick) one shilling two pence *per* foot.

G 4

For

For the Pilaster to the ſame Architrave, ſeven inches thick, ſix pence *per* foot.

For ſcrowls to the ſaid windows, ſix ſhillings a piece.

For ſcrowls and leaves of ſecond Story windows, ſix ſhillings *per* window.

For the Capitol, to the ſtools of thoſe windows, twelve pence *per* foot.

For the quines, ſix pence *per* foot Aſhler meaſure.

For Belconies with Rail and Barrister to the aboveſaid windows, four pound *per* Belconie; being four foot high, and ten foot about.

For rail and barrister on the top of a building, nine ſhillings *per* yard.

For Architrave to doors, one ſhilling ſix pence *per* foot.

For cleaning and ſetting a-
gain

gain old work, as window stuff, grostable, watertable, cornish, quines, and Ashler, four pence *per foot* one with another.

For new cleansing an old front, and piecing the mouldings where it is broken, four pence *per foot*.

Paving of *Portland* stone, eight pence *per foot*.

White and black marble pavement a foot square, costs at *London* two shillings six pence laid.

To be carried and laid in the Country, three shillings six pence.

The Namur stone gray and white, the same price.

The Rans five shillings mixt with white.

The Rans and Purple six shillings.

The

The Prizes in Holland.

White Marble pavement the foot, three ſhillings; the black, eighteen pence.

The black and white, or red and white Marble poliſh'd, five ſhillings.

Black glazed *Holland* Pan-tiles, fix pound the thouſand; ſometimes five pound, and four pound ten ſhillings.

Cathie rough pavement, at three pence half penny the yard workmanſhip, with materials twelve pence, though the Pavitors will exact ſixteen pence.

Pavement with Pibble-ſtone, fifteen and eighteen pence the the yard, ſquare.

Paving tiles fix Inches, eight, ten, and twelve, from fix ſhillings to twenty the hundred.

As

As for the paving of Courts, to prevent the over-growing of grass, and the charge of too often weeding. It would not be amiss to lay Chalk or Lime under the paving, and to do the same in Gardens under Gravel Walks.

This is onely a rate for the ordinary way of paving allowed by Act of Parliament, for which price, but very slight work hath been furnished ; till such time as Mr. *Le Cocur* (having undertaken the Commissioners paving works) hath contrived such a plenty in stone, which hitherto was so scarce that by consequence he hath since rendred the work more plausible at the very same rate. But there is another way yet far more substantial, which the same under-

Undertakers, and Society have induſtriouſly invented, where-
by they are not onely able to
make a moſt ſubſtantial good
pavement, but are likewise ca-
pable by that ſame certain new
invention, to maintain it dura-
ble for twenty one years long,
in reparation at a yearly ſmall
rate, but muſt of neceſſity coſt
them much more then ſixteen
pence once, for all at the firſt
paving.

If materials could be had at
lower rates then the aforemen-
tioned, it would be as well
done to ſeek for ſuch materials,
as to look to the goodneſs of
them. So in the choice of Work-
men for on thoſe who can work
beſt.

To compleat theſe matters, I
ſhall note what is moſt neceſſa-
ry.

First,

First, That what contributes more to the fatall ends of many good Mothers Son, is ill Building Paper like walls, Cobweb-like windowes, doores made fast as with Pack-thread, purposely to tempt men who through extream want are become weary of a languishing life, and to whose fatall end, ill Builders are in a manner accessory.

Let not the *Hollanders, German,* nor any other Northern Nation Vaunt of their scarcity of thieves (nor those of *Delf* in *Holland*; who when the Town Mason had desired them to chuse a day to visit the publick Gallows which he had made, said, that they would serve for them and their Posterity) but attribute the same scarcity to that defence they are wont to make against Theives; but that defence consists not in a super-

superfluous care of putting locks and bolts upon doores or wooden shutters to windows, not iron bars in them that will serve turn, except those locks, bolts, shutting windows, and barrs are made and set on as they ought to be.

The *Hollanders* wooden shutters are double deal-borded wainscot-like-framed within, with Battens, fluted without as the body of a Dorick Column; that the rain beating on them, may the better run down and carry away the dust which may be gathered on them, and that they may not rot so soon as they would, otherwise if they were garnished without with battens; they paint them also in strong oyl colour thrice over to resist the weather the better; the Carpenters do frame them so
exact

exact to the width and height of the stone casement of the window, as that scarce a knife could be thrust between them they are not hung with cross garnets; because such are easily taken off, nor are the broad shoulders of an iron hook the onely thing that can hinder theeves to loosen such a window, nor the iron bars; Theeves having a way to remove iron bars without breaking of them, or making half so much noise as on a wooden bar.

The iron hinges ought to be framed between the two deal boards, whereof the shutting window is made, and the head of the hinge is to be so well fitted in the stone, as that no access can be had to it, the bolts within strait or crooked, must have a shutter at its tail.

Now

Now if a Builder will not be at the charge of such shutters without doores, they must then have wooden or iron bars to secure those within.

Doores may be secured, not onely by a wooden or iron barr, but by a strong chain hung at the one end in an iron ring, at the other end in a like ring, both united with a strong Padlock, then any Porter may open a gate or doore six Inches less or more to receive a Packet in the night when it so happens.

Nor do provident Builders rivet locks only at the one side, for that a thief within doores in correspondence with one without makes that single riveting of no use as to security; rivets to locks must be enterlaced with rivets between the double bord, nor should the key-hole of an outward

ward door of a house be left uncovered in the night, for if through the negligence of him that is the keeper of the gate, neither bolts nor bars are remembered; Why? a pick lock may soon open such a door or gate; it is an easie contrivance to have a bolt with a large head that shall cover the key-hole of a door or gate, to make fast from without to the inside, and so secure the lock; and if the key of that bolt is brought at night to the owner of the Palace, none can run out a gadding or drinking.

And so much may suffice for the securing of doors and windows, onely this more. That there ought to be an Iron plate of the width of the door, and four foot high, walled in within, so fastned on both sides

H

as

as that no violence from without can make a breach, since in divers places Rogues have taken up the causey or pavement before a doore, and then with facility loosened the bricks under the threshold to make a passage into the House.

But as for thieves who do untile houses, such may be kept out, if the feeling be boarded or made up with plates of tinn, or arched with brick as is practised in the Banks of *Loane*, which in other parts are erected for the relief of the Necessitous.

Furthermore, In reference to the main of the contents of a former Printed Discourse, concerning the three first Principles of Magnificent Building; As the well choosing of a fit place for a Building, is a Capital piont, to set it right, and the giving a fit extent

extent to the Court, so the making to it a Porch ought to be well considered, For as a Porch serves to a Hall to distribute Almes to the Poore; a porch proves often cumbersome, being the receptacle of foul creatures, who as soon gotten into a Court make it their randevouze; Nor is a porch so convenient to the Palace of a Prince, whose person must be attended by a great retenue, and no man to stand in his passage; But if a porch be affected, let it then be a vaste *Portuco*, as that of *Solomons* House was. and that he Built for *Pharaohs* Daughter.

Now as for the placing a Gate or Door to enter into the Hall of a Palace; None will deny but that Greatnesse and Conveniency being conjoynt fits best. The enterance into a Hall is not

ſo proper in the middle as at the end, when the ground plot is yet to chuſe and to be ordered; But if there be a constraint, which is moſt prejudicious to a Building, the entrance muſt be ſet as much towards the end as poſſible can be, to ſet the Chimney well, and the main Stair-caſe in ſo fit a place, as that it may not be ſubject to a like fatal accident as happened to *William Prince of Orange at Delf* when he was ſhot by one who ſtood behind a Column, oppoſite to the Stairs of that Prince his houſe.

The riſe, width, and depth of ſteps, ſhall not need to be repeated, ſince they have been deſcribed, and reaſons alledged for their dimension, mentioned both in the former printed, and in this diſcourſe; nor ſhall repetitions be neceſſary concerning the

the reason why the first Floor of a building should not lye level with the ground; The first for health; the second for neatness, since any floor level with the ground receives more dirt from abroad; the third for greatness, which appears more by an ascent; the fourth for the Vaulting of Sellars or any other Offices; and the fifth, to have the floors more dry: Onely I shall insert this story of one in Authority, *Who passing by a Town wherein the people generally did not out-live the thirtieth year of their Age; caused all the back of their Houses to be made the Front, and the windows which were forward to be made up, to free them from that infectious Air that did shorten their Lives, which had its effect accordingly; and it is therefore I do so much insist on the*

point of placing a Building where good Aire is, & that neither chimnies nor doores may be so placed as to serve for the attracting of infectious Aire which kills more then the sword or the Seas overturnes ships.

To take my leave of all Builders, I must conclude with what followeth,

First that when they shall be pleased, to take a Poley out of the former Printed Discourse, and joyne it, to what may please them, out of this they will finde, that both hit the main marke, to wit, *Solidity, Conveniency, and Ornament*, altogethet to be observed in true Building. That all what is represented is for their profit and satisfaction, that the manner and phrase of the first discourse, was to that end intermixt with recreative passages, & the

the Reader should not be tired with the Mechanicks their phrase, and proper Names of their several Trades, though some of them are wont to scoff at those whose language is polished; as if a person of Eminent Quality, (Born to the Highest Concernment of a State) should have learned their words, and have spent therein part of his pretious time; And therefore I have now offered, to write, in such workman-like termes, as may serve for a Clark of the works to speak unto them.

Secondly, That all owners of Buildings, shall do well to make choice of such a person for their Clark as the Master workmen will endure, which they will not, if he be a Master workman, whom they will not only suspect to have a design to undermine

and supplant them, but obey not, pretending to know more themselves; Nor is it fit that there should be such a controuler over a Master Workman, as a Workman: The same is to be observed with a Surveyor to prevent all quarrels and contests: for as every Cook commends his own Sauce; more then one Cook to a dish will spoil it; there cannot be two Suns in the Firmament, one General over another; nay two Cocks among Hens.

In a word, an Owner must trust, or never make choice of Trustees; For if otherwise, let him be certain that his purse will be incessantly abused.

Thirdly, Let all Owners be prepared to Repent, whether they build or not, for it is likewise the fate of many that marry or marry not.

Let

Let both the one and the other lay (as in a Scale) their several charges, vexations, cares, labours, and pleasures, they will find this to be true, *viz.* If they build they must be at great present disbursements, vext with as many oversights (as Printer-Setters will commit faults, as appears by the *Erratae* at the end of Books) and to be over-reacht in Bargains concerning their Materials, as also in work done by the Great, or Day.

If they build not, they are subject to the inconveniencies of Houses built according unto the fancies of the Owners, and when they shall cast up the summs of money spent in the rent (besides many chargeable alterations) they shall find that they might have built a better and more fit habitation for them and their poster-

poſterity; So will it be with men that marry or marry not.

The firſt will have had cauſe to exerciſe the Vertue of Patience, and if he be a *High German* (eſpecially a Swab) ſuch as have wives, that believe their husbands doth not love them, except they be beaten, Why? They will be practitioners in the mortification of their own fleſh and bones; for let women ſay what they will, they are bone and fleſh of man, and not the head, though ſome of them would wear the Bonnet and Breeches to boot; Well the Husband (after all his pains and vexations) if he can turn all things to the beſt, will have (as the *Italian* ſaith) a ſound *gusto*, he will have obſerved the *French* ſaying, *Lie tes doits, a l'herbe que tu cognois*, and by a mixture of good bloud
(ſprung

(sprung from a clear Spring) settle his name to posterity.

If he marry not, O how many dangerous encounters for him both in body and soul!

And how can such a one contest the Divine decree; That it is not good for man to be alone?

Paradise would have been but a Wilderness without a Woman; nor can Trees speak a word of comfort to a good man when stretched forth in his cold bed, tired of the Labors of a dark Winters day; and let such a one, at the end of the year cast up his bill, he will find to have spent more in Presents of consideration about another mans then his own; and if he be a Trades man, in Potting, Gadding, Codlings, Pudding-pies, and Bare-baiting, (with ranting Creatures) then if he had been married; therefore
if

if men must Repent, let them have somewhat that is called *meum* without offence for their Repentance.

Now if these two sorts of men, the one will resolve on the affirmative, delight to spend money on choice Materials, as in particular to imitate *Solomon*, in the procuring of precious Wood; they may take notice (if they please) that store of precious Wood can be had for the boarding of Princely Palaces, both for Colour, Aromatick smell and durance; to make square framed Pannels (more rich then those which are seen at *Paris* in the Cabinets of the Palace called *Orleans*) which precious Woods are to be had in several parts in the *West-Indies*, some whereof are as red as the fairest *Vermilion*, some yellow as Gold, hard as Marble;

Marble; besides rare *Madera*, and other variously figured, as the Right Honourable the Lord *Willoughby* of *Parham* well knoweth, what extent of Land about *Surrenam* is beset with speckled wood, and is not above six weeks sail from *England*, where ships full of lading may be had, besides large Timber, eighty foot high, At Abacaz streight, without a knot, and at no other cost but felling and lading, more advantageous then to pay for Firr from *Norway*; besides a very gainful return of *Amber Greece*, and vendible commodities in exchange of Iron Tools, Sissers, Knives, old Linnen, and trifles.

To conclude, *May all Builders both of Palaces and of particular Habitations, have good success and, possess them in peace and prosperity.*
May

May also all Surveyors, Master Workmen, Journey-men and Labourers, behave themselves so as they ought.

Take well this former Counsel and Advice, give no admittance to Pride, the Enemy of all Learning; whereof a King was such a Lover, as that when near the hour of his leaving the World, he saw one advance more then others to him within the Curtaine of his Bed, he askt, Whether he could learn him any thing that was good.

F I N I S.



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